

American Artisan and Hardware Record

Sheet Metal—Roofing—Warm Air Furnaces—Stoves

Vol. 91, No. 13

CHICAGO, MARCH 27, 1926.

\$2.00 Per Year

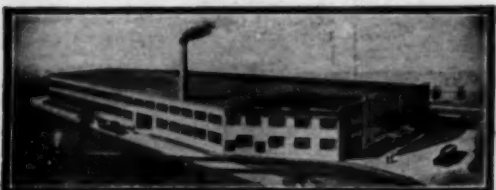


Main Plant and General Offices at Milwaukee, Wisconsin

Sixteen Acres of Floor Space at Your Service



Branch at 4650 W. Harrison St., Chicago, Ill.



Branch at S. W. Blvd. & "B" St., Kansas City, Mo.



Branch at 2150 South Ave., La Crosse, Wis.

THE confidence of the Trade in Milcor quality and the reliability of Milcor Service, together have caused the steady development of Milcor manufacturing facilities. From a comparatively small beginning, Milcor has grown to its present dominant position in the Sheet Metal Industry.

Floor space totalling sixteen acres is now devoted to manufacturing and warehousing at the Main Plant in Milwaukee and at the three Branches at Chicago, Kansas City and La Crosse. In addition, the Milcor Line is carried in stock by Leading Jobbers throughout the Country.

You can depend on quick service by standardizing on the complete Milcor Line. You can likewise depend on the best quality in Milcor Products—all made from the finest sheets the steel industry produces—all carefully inspected to safeguard your interests with your Trade—all designed with unequalled practicability.

Many of the items in the Milcor Line are Patented. Make certain that you get the advantages of this additional value by **always** insisting on Milcor.

Your Trade Appreciates Milcor Quality
Largest Manufacturers of Eaves Trough, Conductor
Pipe and Trimmings. Annual Capacity exceeds
Fifty Million Feet.

MILWAUKEE CORRUGATING COMPANY
MILWAUKEE, WISCONSIN

Chicago, Ill.

Kansas City, Mo.

La Crosse, Wis.

MILCOR

Sheet Metal Products

The Milcor line is now made in ARMCO Ingot Iron, Pure Copper, Zinc, Steel and Coppered Metal





Are Your Customers Satisfied?

Satisfied users are your best salesmen. They recommend you to their friends. That is just what you want them to do. That is the best way to increase your business.

Are your customers satisfied? Does the furnace that you sell, live up to the reputation that you have given it? If it doesn't, you are losing business, because your customer won't recommend you to his friends.

You can turn your customers into salesmen by installing



Tell your customers that the Novelty Modern Furnace has twice the heating surface found in most other furnaces. Prove your point by passing a string around the crab section going in and out each crab. Compare the result with that of some other furnace.

Then tell him that the Novelty Modern is a self-cleaning furnace. Show him how the dirt and dust hits against the sides of the radiator or drum and falls back into the firepot.

A self-cleaning furnace with twice the usual amount of heating surface adds real weight to your sales talk; so tell your prospects about Novelty Furnaces as they are explained in the Novelty Furnace booklet. They will live up to the reputation that you give them. Write today for complete information. Address Dept. T-3 at the nearest office.

1847

ABRAM COX COMPANY

1926

Formerly

Abram Cox Stove Company

Philadelphia

American & Dauphin Sts.

New York

51 E. 42nd St., Cor. Vanderbilt Ave.

Chicago

736 W. Monroe Street

For 79 years, manufacturers of Novelty Pipe and Pipeless Furnaces; Round and Sectional Boilers; Coal Tank Heaters and Laundry Stoves; Coal Ranges; Combination Coal and Gas Ranges; Fortune Gas Ranges and Gas Water Heaters.

More Than Heat Needed For Home Comfort

Most people think that if they have heat in the home, if the thermometer registers 72 degrees in the winter-time, they have all the requirements necessary for home comfort. This idea is wrong, as has been pointed out by the Warm Air Heating and Ventilating Association. There are two things necessary for heating comfort in addition to heat. The first one, as you know, is humidity, which we discussed last month in the form of a sales story; and the second is a complete circulation of the air in the home.

The necessity of a complete circulation of the air in the home gives you a good sales story that you can use in selling the furnace. Here is one of the ways that you can talk it. Say to your prospect:

"Undoubtedly, you have been in a crowded room and noticed that in a short time it became stuffy and close. This stuffy condition was caused by a lack of air motion in that room.

"Tests in heating laboratories all over the country have shown that motion has the same effect upon air as it has upon water. You have seen ponds where the water was stagnant because it had no means of moving and 'washing out' the impurities it contained. In a brook, however, the water is always fresh, because it is in continuous motion.

"The same thing happens to the air in your home. If it moves, it will pick up oxygen and this oxygen will purify the air. You can prove for yourself that this is true by starting an electric fan the next time you are in a room that has become stuffy and close. The electric fan will set the air in motion and this air will soon be fresh because it has been mixed with the oxygen that is in the room and has brought that oxygen to the breathing line.

"Tests have also shown that with a warm air furnace of the correct size and properly installed, the air in your home will be in constant motion. This movement of the air will continually carry oxygen to the breathing line, so that the air always will be fresh."

Then, of course, tell your prospects about the kind of installations that you make and how, because cold air falls and warm air rises, all of the air in the home will be in motion. Also be sure to explain how this air is picking up moisture, which is needed by all heated air.

Don't hesitate to use these sales stories, because even though they are well-known to you, 99 out of 100 home-owners never have heard them, and therefore, you are giving them interesting information that they should know before having a new heating system installed in their homes, and it will help you to close many jobs.

E. F. GLORE.

This is the eighteenth of a series of articles by Mr. Glore on the subject of warm air heating.

**A Warm Air heating
system is Best For
the average Home
Convince the public by
telling them constantly**

Lennox *Heavy Steel*
Torrid
Zone
year
nty
Furnace

Heavier Steel

10 year
Guaranty

THE field for warm air heating is always increasing.

The continuous growth of the country, the ever increasing population and the general prosperity of the people make more homes a logical conclusion.

The warm air heating industry is in an enviable position to reap the bulk of this increased heating business—right now and in the future.

The numerous advantages of warm air heating from all angles are being given to the public more and more and recognition is shown by increased sales.

Are you getting your share?

The thing for you to do is to put your warm air heating business on the very soundest basis and highest plane—select a *good* furnace and do *good* installation work.

The Torrid Zone Furnace has been a leading factor in good warm air heating for *over thirty years*.

Its high quality and exclusive design are known to be in harmony with the best heating results.

We will tell you more about the Torrid Zone Furnace and its agency if you will just write us for full details.



This is the NEW TYPE E TORRID ZONE with new and exclusive features embodied in DOVETAIL COLLAR—RADIATOR DAMPER ASSEMBLY—BRICK GUARDS—GRATES—WATER PAN and BASE RING. Study this construction—write for complete catalog and you will readily see why it is the furnace for present and future increased business.

The Lennox Furnace Company
Marshalltown, Iowa Syracuse, N. Y.

Syracuse, N. Y.



Weir

GUARANTEED FOR FIVE YEARS

THE WEIR guarantee is different—it has no strings to it—the grates, fire pot and *every* part is covered by this guarantee.

It is a *good* guarantee—a guarantee that means something—a selling argument that carries real weight.

This broad WEIR guarantee signifies to the prospective buyer the quality of the WEIR—the strength of the forty-three year WEIR reputation and the high type of heating service you can render.

*This is just one WEIR feature—
let us tell you all of them.*

Write for
your
copy of



The WEIR
Book
of Facts

The MEYER FURNACE Co
Peoria, Illinois



Yes, There Are Others

NO; we do not claim to make the only good furnace in the world.

Nor to be the only square dealing firm in existence.

There are others.

But, nowhere will you find a finer combination of good furnace, fair treatment, good service and general all around satisfaction than with us.

We'd like the chance to prove it to you.

The
Henry Furnace & Foundry Co.

3471 E. 49th Street

Cleveland, Ohio

*Manufacturers of single and double wall pipe
and fittings, galvanized pipe and fittings, etc.*

Eastern Sales Offices:

F. H. HANLON
Batavia, New York

W. S. McCREA
105 Federal St., N. S., Pittsburgh, Pa.

Western and Southern Distributors:

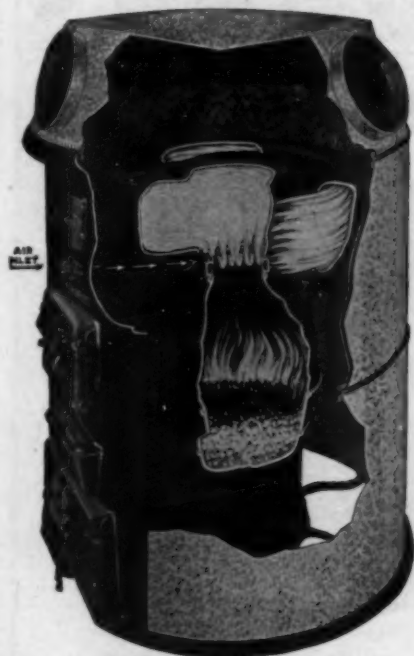
JOHNSON FURNACE CO.
Kansas City, Missouri

MONCRIEF FURNACE CO.
Atlanta, Ga.

MONCRIEF FURNACE & MFG. CO.
Dallas, Texas

MONCRIEF FURNACES

WE HELP YOU SELL THE FURNACES YOU BUY!



Cut-away View of
SUPER-SMOKELESS FURNACE

UNDER the new Utica Merchandising Plan our representatives co-operate closely with our dealers and help them sell the furnaces they buy. We have a definite Merchandising Plan which brings you new customers—sells more furnaces—and increases profits. It has been thoroughly tested by Utica dealers and is a proved success.

Besides the Merchandising Plan itself—which insures more customers and more sales—our dealers get valuable advertising and sales literature—and “cash in” on the many superior advantages of the SUPER-SMOKELESS Furnaces.

The new Utica Merchandising Plan places Utica dealers in a distinct class—*above competition*. It enables them to get the greatest possible amount of business and secure satisfied customers who build future business. It will pay you to sit down—right now—and write us to send, without obligation to you, full particulars of the new Utica Merchandising Plan.

UTICA HEATER COMPANY
UTICA, N. Y. CHICAGO, ILL.

New name, new features, old time high quality, improved construction, a new size and also a new furnace—

AFCO

New Copyrighted Name of American Furnaces

BOILER PLATE FURNACES

THE American Agency for 1926 means more than ever before with these new and better business getting assets.

We have increased our production facilities also by installing \$50,000 worth of new machinery.

We want to tell you in detail all about the improvements on AFCO BOILER PLATE FURNACES and the new size and also our NEW CRESCENT TYPE RADIATOR STEEL FURNACE.

Write today for complete details and the American Agency offer.

AMERICAN FURNACE CO.
2719 to 2731 Morgan Street St. Louis, Mo.



"AFCO" BOILER PLATE FURNACE
(Formerly Known as the AMERICAN)



The
WESTERN
BOILER PLATE FURNACE

is
made in Duluth—used
throughout the United
States and Canada—
and
distributed by the fol-
lowing firms—

NEW ENGLAND STATES
Decatur & Hopkins Co.
93 Berkeley Street, Boston, Mass.

SOUTHERN STATES
American Fdy. & Furnace Co.
Bloomington, Illinois.

WEST CENTRAL STATES
Standard Furnace & Supply Co.
Omaha, Nebraska

KANSAS AND MISSOURI
Kansas City Furnace Co.
Kansas City, Mo.

WRITE to your nearest distributor for
circulars and prices and full informa-
tion. Agency details for your territory can
be obtained from home office.

THE WESTERN STEEL PRODUCTS CO.
DULUTH, MINN. MINNEAPOLIS, MINN.

THE SECURITY

PIPE AND PIPELESS
WARM AIR FURNACE



IN order to keep our foundry completely
covered up with work, we need a limited
amount of carload business from well
rated concerns.

AND

We are willing and able to make
VERY ATTRACTIVE PRICES TO DO IT

THE
SECURITY
AUTOMATIC
OIL BURNER



SAFE, SANE AND
SATISFACTORY

SECURITY STOVE & MFG. CO.
KANSAS CITY, MO.



Profits you've passed by-

are still waiting for you. Have you been limiting your furnace sales to homes? That's the easy market, of course, but there are bigger sales, and bigger profits.

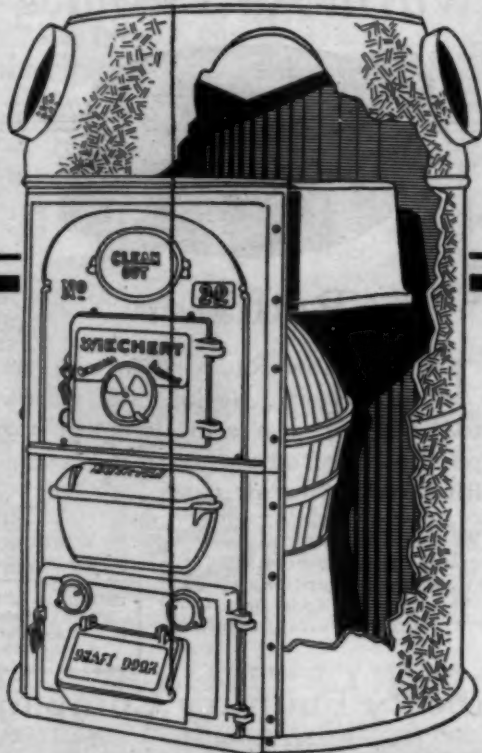
Stores, shops, offices, theatres, schools—these structures need Wiechert furnaces. They need plenty of heat in any weather, with a low coal bill and not much attention to the furnace.

All that spells Wiechert!

There's your market for the Wiechert No. 20 Series Round Type Pipe Furnace, or perhaps a Heavy Duty Type. It fills the bill exactly—and there's a big profit for you in the price. Write for discounts today!

St. Clair Foundry Corp.
Centralia, Ill.

No. 20 Series Pipe Furnace



THE THATCHER METEOR FURNACE

One piece cast iron radiator. High combustion chamber. Double feed door. One or two piece fire pot. Large centrally located water pan. Extra high ash pit.

Get your Share of Replacement Business!

THIS IS THE SEASON when hundreds of house-owners in your community are looking for a fair priced and economically and efficiently operating furnace to replace their present unsatisfactory heating systems.

They will appreciate being told of the Thatcher Meteor—a furnace built by a 75-year-old organization of heating experts to solve the problem of economical and efficient heat for every house-owner. It pays you to recommend and install the Meteor because you take no chances on its performance! Incorporates every modern labor and fuel saving feature. No matter what fuel is used—hard or soft coal or wood—the owner is assured of ample and uniform warmth on the very coldest days—and with the minimum expense and trouble.

May we tell you, *NOW*, about the remarkable Meteor and how you, as a Dealer, can cash in on our helpful Engineering and Advertising co-operation.

THE THATCHER COMPANY

Formerly Thatcher Furnace Co.
Since 1850

NEW YORK
21 W. 44th St.

39-41 St. Francis St.
NEWARK, N. J.

CHICAGO
341 N. Clark St.

THATCHER

BOILERS-FURNACES-RANGES

Mention **AMERICAN ARTISAN** in your reply—Thank you!



20 years of Success and Service behind every Wise Furnace

THE dealer doing business with Wise furnaces and the Wise agency sells furnaces that have proven successful and unusually satisfactory for over twenty years.

He offers to his public furnaces that are noted for their great durability and numerous heating and convenience features.

The dealer who secures the Wise agency for his territory aligns himself with a company that believes and lives up to its policy of real Service in deliveries and all other transactions.

The Wise guarantee is this:

Highest Quality, Best Workmanship, and Absolute Satisfaction to the dealers.

Wise furnaces represent high grade warm air heating service at an economical cost.

*Write for interesting catalog and
agency details NOW*

The WISE FURNACE CO.
AKRON, OHIO



*Gives Users the Utmost Satisfaction
Gives Dealers Handsome Profits!*

WASHINGTON HOME FURNACE



"No—This is not
a Victrola"

Beautiful Grained Mahogany Finish—
Harmonizes with finest mahogany furni-
ture—Also plain finish for one-third less.

THE Most Beautiful
and Expensively con-
structed Furnace on the
Market.

Backed by a nation-wide
advertising campaign.

Improved Air Duct In-
creases Heating Capac-
ity 30 per cent.

Correct Location of
Water Pan, Hot Blast
Fire Box and Many
Other Features.

**No Basement
Needed. No name
on outside.**

Placed above the floor. May
be installed in living room.
Saves expense of digging cel-
lar. It produces circulating
moist heat for five to seven
rooms.

GRAY & DUDLEY COMPANY
NASHVILLE, TENNESSEE

"We Melt Over 100,000 Pounds Southern Pig Iron Daily"

Features of the MELLOW Warm Air Furnace



No. 1

Radiator

THE Mellow Radiator is cast in
one section. No joints or seams
to become loose and therefore no
possibility of smoke or soot getting
into the heated air.

*We have an attractive agency offer on this high
quality Mellow Furnace. If you are looking
for an exceptionally good
furnace at a fair price write
today for full information.*

CHICAGO OFFICE
2356 N. Clark St.
R. G. Ray, Manager
Lincoln 0091

Liberty Foundry Company
St. Louis, Mo.

BOOMER

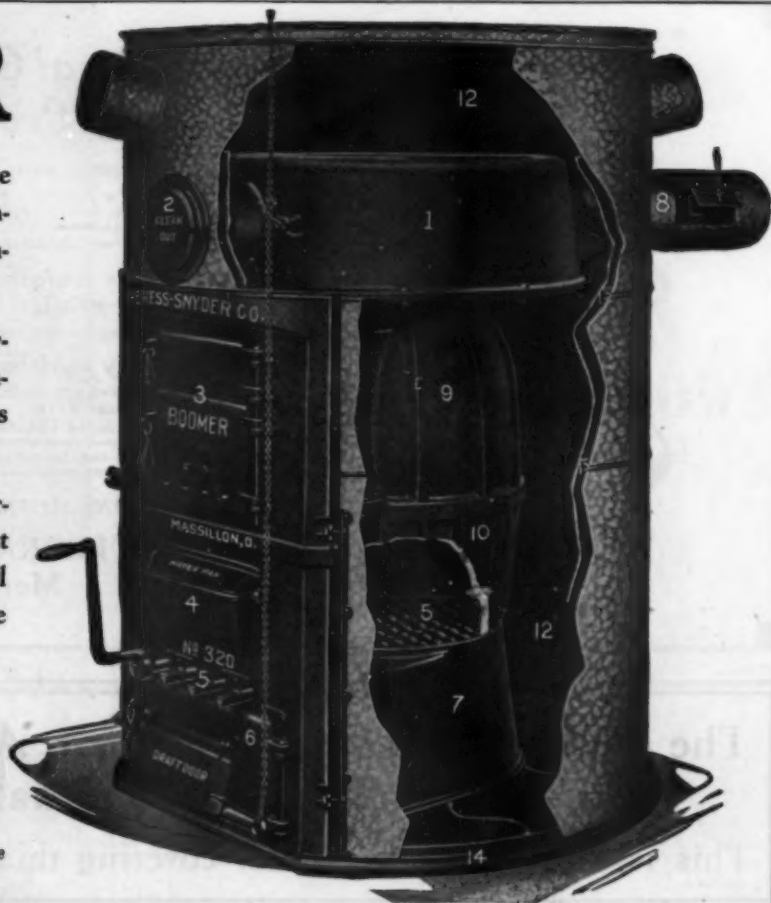
THIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

THE HESS-SNYDER CO.
MASSILLON, OHIO

Makers of BOOMER FURNACES for Forty-Three Years



A complete Furnace and Supply Service!

THE furnaces shown here, the Nesbit, the Weir and the Stanco, fit your every requirement for quality warm air heating and at the right price.



Nesbit All-Cast Furnace

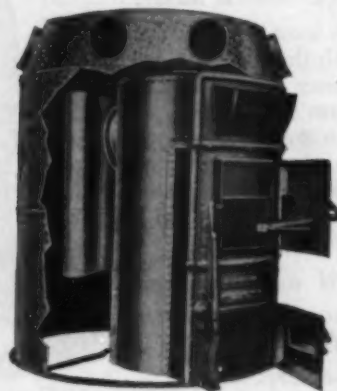
LET us send you full details and catalogs covering this line. Let us show you the completeness of our furnace line and demonstrate our reliable service.



Weir All-Steel Furnace

WE carry large stocks of every needed furnace supply item from Registers to Furnace Cement. All leading makes and dependable quality.

*Let us fill your next order—
we will give you real service.*



Stanco Steel Furnace

STANDARD FURNACE & SUPPLY COMPANY
Omaha, Nebr. Western Service for Western Dealers Sioux City, Iowa



Why a Floral City Agency Will Make Big Profits For You—

You can sell every prospect because

We have a size and style for every job.
Our prices and exclusive features eliminate competition.
Our guarantee of quality and long service speaks for itself.
We offer merchandising helps.

The inevitable volume of sales from a proven leader means big profits.

Remember, we sell only to the trade.

Your sales stay sold because

Our furnaces are built durable, of the best materials to give long life.
Our furnaces have

More rapid circulation of air—Better combustion of gases and smoke—Convenient and efficient air moistener—Smoke pipe which can be taken off at any angle—Flat or triangular grates, interchangeable—Perfectly suited to any fuel.

CATALOG AND AGENCY PROPOSITION UPON REQUEST

THE FLORAL CITY HEATER CO.

Monroe, Michigan

The *latest news* about the *Warm Air Heating Industry* is to be found in this Journal *every week*.

This is the only trade Journal covering this field published *every week*.

BRILLION FEATURES

Lever Shaker Handle—Full Cast Front—Extra Large Double Doors—Extra Large Water Pan—Extra Large Ash Pit—Extra Heavy Corrugated Fire Pots—Large Cast Convertible Radiator with Permanently tight joints.

THE Brillion with these features and a price that is far below the run of furnaces of this high quality is a real business maker.

We want live dealers to tie up with the Brillion—we have an agency plan that appeals to warm air heating contractors who are out after both quantity and quality business—with good profits. We can show you where the Brillion will make real profits for you.

Fill out and send the coupon below TODAY—we'll do the rest.

Branches in Chicago, Ill., Minneapolis, Minn., Milwaukee, Wis., Seattle
BRILLION FURNACE CO., 200-300 Park Ave., Brillion, Wis.

----- Send this coupon today -----

Send me full details, prices and your catalog No. 45.

Name

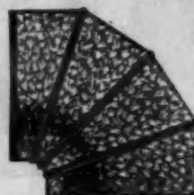
Address



Established

1902

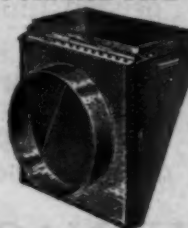
CHICAGO FURNACE PIPE AND FITTINGS



Order CHICAGO COLD AIR ELBOWS now for that next job and notice their much better and stronger construction.

They are more economical too. Prompt shipments from large stocks.

When it comes to perfect fitting you can bank on it that CHICAGO FURNACE PIPE will always go together quickly and firmly. Its design and construction can't be beat.

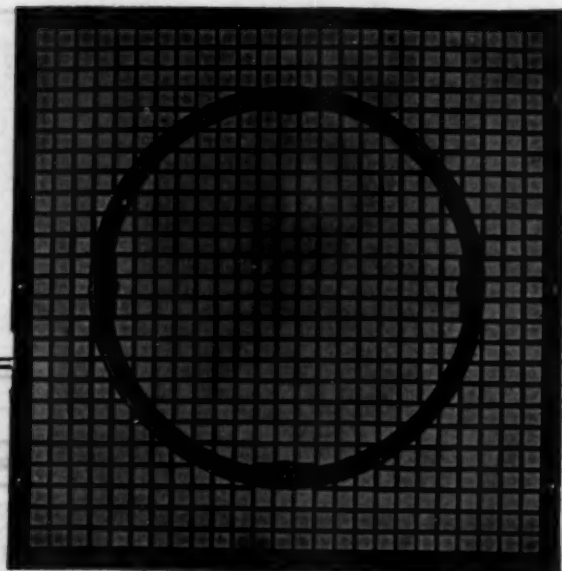


Find out now why CHICAGO FURNACE PIPE will be the best pipe for you to use. Get a sample in your hands—the sample is free.

WRITE TODAY FOR NEW CATALOG

CHICAGO FURNACE SUPPLY CO.
1276-78-80-82 Clybourn Ave. CHICAGO

Mention AMERICAN ARTISAN in your reply—Thank you!



*An unusually well made
and carefully finished
pipeless grating*

WALWORTH Duplex Register

THIS grating is run through the polishing machine *five complete turns* before it is sent to you.

It is by far the most popular pipeless grating on the market and its high quality is the reason.

The Walworth Duplex Grating is made in seven standard sizes from 22x24 to 45x45.

We carry immense stocks at all times in order to supply your needs promptly.

The design shown above is our Plain Lattice Design. It is very strong and durable and unusually neat.

Write today for complete catalog
and price list.

Made by the makers of

Walworth Semi-Steel Registers, Ventilators, Borders, Side Wall and Base Board, Registers and furnace Casing Rings

THE WALWORTH RUN FOUNDRY COMPANY

West 27th Street and N. Y. C. & St. L. R. R., Cleveland, Ohio

Distributors:

ROBINSON FURNACE CO., Chicago, Ill.

HART MFG. CO., Louisville, Ky.

PHILLIPS & BUTTORFF MFG. CO., Nashville, Tenn.

Eastern Representative:

PENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.



EXCELSIOR ADJUSTABLE ELBOWS

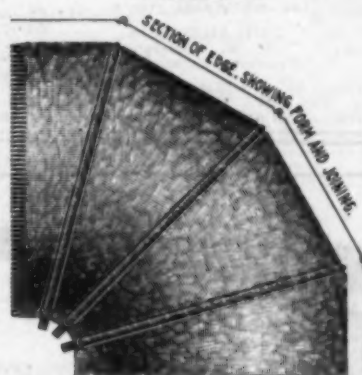
TIN—Black and Galvanized

"ALWAYS ADJUST"

Sizes



3 inches



to 48 inches

The ease with which EXCELSIOR Elbows adjust, their strength and beautiful appearance, appeal to the discriminating furnace man.

You might think they cost more—but they don't.

If you are not handling Excelsior products it will pay you to write for Catalog and Quotations.

**NO EXTRA CHARGE
FOR EXCELSIOR QUALITY**

THE

Excelsior Steel Furnace Co.

114-118 So. Clinton St.

CHICAGO

ILLINOIS



EVERYTHING you may want—assortment, finish, quality, delivery, etc.

For years this company—one of America's most complete producers of stove trimmings—has been furnishing such material for many of the largest users.

ASK US ABOUT OTHER ATASCO STAMPINGS

What are you in the market for at this writing?

THE AMERICAN TUBE & STAMPING COMPANY

BRIDGEPORT

CONNECTICUT

DETROIT
C. C. Limbocker
1411 Central Avenue

ST. LOUIS
Hubbell & Sharp
1216 Chemical Bldg.

NEW YORK
G. L. Anderson
The Shelton

SAN FRANCISCO
A. P. Bartley
62 Second Street

District Offices:

CHICAGO
A. L. Seamon
549 W. Washington St.

PHILADELPHIA
E. W. Harrison
Franklin Trust Bldg.

ATLANTA
W. T. Withers
Atlanta Trust Bldg.

HARTFORD
P. C. Hawley
290 Edgewood Street
MONTREAL
Jas. W. Pyke & Co.
Ltd.


233 St. James Street
WORCESTER
J. A. Snyder
316 Park Bldg.
CLEVELAND
F. H. Grace
602 Hunkin-Conkey
Bldg.



BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

THE KIRK-LATTY MFG. CO.
1971 W. 85th St. Cleveland, O.



PATTERNS

FOR STOVES AND HEATERS FIRST-CLASS IN WOOD and IRON
VEDDER PATTERN WORKS ESTABLISHED 1835 TROY, N. Y.

IRON AND WOOD STOVE PATTERNS

QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO



ADVANCE NOTICE

Annual Convention 1926 National Warm Air Heating & Ventilating Association

HOTEL CHASE 11 ST. LOUIS, MO.

Wednesday and Thursday, April 14th and 15th

You are courteously urged to reserve these dates and be present

An intensely interesting program and business docket is being prepared. No Furnace or Accessory manufacturer should miss this convention. New and Special features.

February 19, 1926.

ALLEN W. WILLIAMS, Secretary
Columbus, Ohio

Complete detailed report of these meetings will appear in our
April 17th Issue

This means exceptional advertising value for furnace and furnace accessory manufacturers.

BETTER RESERVE YOUR SPACE NOW!

AMERICAN ARTISAN

620 S. Michigan Avenue

Chicago, Illinois

THE BIG OPPORTUNITY for 1926 For FURNACE JOBBERS

Lies in
the
Agency
for

Grand

Warm
Air
Furnaces

Secure It Before It Is Too Late

Unrivalled Production Facilities Enable Us to Offer
You a Furnace, Unequalled in Finish and Mechanical
Precision—and at a Reasonable Price.

The Cleveland Co-operative Stove Co.
East 67th St. and Central Ave. Cleveland, Ohio

Send for our
illustrated book
of order
blanks

NORTHWESTERN

REPAIRS
FOR ALL
STOVES
FURNACES
BOILERS

The Oldest and Largest
STOVE REPAIR CO., Chicago

"American Seal" FURNACE CEMENT

**Roof Cement — Stove Putty
Plumbers Putty**

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.
TROY NEW YORK

Established 1852
JAMES L. PERKINS
Western Distributor
140 S. Dearborn St., Chicago, Ill.

REPS AERO-GAS RADIANT HEATER

DESIGNED by the original
producer of Gasoline Pres-
sure Radiant type heaters.

Finer results and perfect satisfac-
tion. Heavy gauge steel construc-
tion, baked black enamel finish
and nickel plated trimmings.

Top is designed to enable cooking.
All parts are extra strong and well
made. This illustration shows
method of lighting.

Write today for illustrated circular
giving full description of this
heater and our new complete line
of high grade quick selling Gas-
oline Pressure Cook Stoves,
Rangestoves, Cabinet Ranges and
Table Ranges.



REPS HEATER COMPANY, Clyde, Ohio

Now is the time to land those contracts for ASBESTOS Insulation

**And you can do it better if you
have this scientific chart to
show your customers—to show
them that you know how to do
the work right—the chart is
free—just send the coupon.**

ALONG with the chart
we will be glad to
send special circulars de-
scribing in detail the vari-
ous SAL-MO Asbestos
Insulating products.

SAL-MO Products have
been used by the furnace
trade as *the best* for
over a quarter of a
century.

SAL-MO leadership is
proof of their superior-
ity.



PAPER AND BOARD PIPE COVERING CORRUGATED PAPER AIR-CELL BLOCKS CEMENT. ETC.

ASBESTOS DIVISION

SALL MOUNTAIN COMPANY

SCRANTON

CHICAGO

BOSTON

Factories:

Porter, Indiana
Scranton, Penna.



Factories:

Rockdale, Ohio

Warehouse: 45 Commercial Wharf, Boston

SALL MOUNTAIN CO.
140 So. Dearborn St., Chicago, Ill.
Send me without obligation Fuel Chart "E."

A.A.

Name
Address

Mention AMERICAN ARTISAN in your reply—Thank you!

Published to serve
the
Warm Air Furnace,
Sheet Metal, Roofing,
Stove and Hardware
Industries

Founded 1880

American Artisan and Hardware Record

Yearly Subscription
Price:

United States \$2.00

Canada . . . \$3.00

Foreign . . . \$4.00

Published EVERY SATURDAY at 620 South Michigan Avenue, Chicago

EDITORIAL AND ADVERTISING STAFF

Etta Cohn
J. F. Johnson

G. J. Duerr
Frank McElwain

Eastern Representative: W. C. White, 1478 Broadway, New York City

Vol. 91, No. 13.

CHICAGO, MARCH 27, 1926.

\$2.00 Per Year

Table of Contents

	Page		Page
Sheet Metal Department	17 to 27	The Editor's Page	29
Iowa Contractors Hold Sheet Metal Short Course at Iowa State College	17	The Value of Public Liability Insurance.....	29
Iowa Travelers' Auxiliary Members Take Pledge to Assist Iowa Sheet Metal Men	20	Extending Courtesy to the Salesmen Who Call	29
Homer F. Brundage Delivers Address at Iowa Meeting	21	Heating and Ventilating Department.....	30 to 34
Showing How to Lay Out Pattern Round Bot- tom Sheet Metal Boat, by O. W. Kothe....	24	President Langenberg Corrects Misleading Impression of Purposes of Research.....	30
Branch No. 1 Cook County Sheet Metal Club Appoints Trade Relations Committee.....	25	Homer Furnace Company States Big Display in Leiter Stores Building, Chicago, by George J. Duerr	31
Ohio Sheet Metal Jobbers' Auxiliary Making Strong Membership Appeal	26	W. C. Eickelberg Is Having Difficulty Heat- ing This House.....	33
Notes and Queries	27	George W. Hasselbrink's Question Answered With Regard to Hard and Soft Coal.....	34
Random Notes and Sketches.....	28	Coming Conventions	38
		Markets	48

AN ACHIEVEMENT

An explanatory note regarding service to readers of AMERICAN ARTISAN. This paper is now nearing the completion of a half century of service. For almost fifty years it has catered to the needs of the men in the industries which it represents. At no time during its long and successful career has AMERICAN ARTISAN been in a better position to render complete, adequate service to its readers than it is today. In addition to the matter contained in our regular weekly publication, we maintain Service Departments for the use of our readers. If you have a problem to solve, we courteously invite you to submit it to us for solution. In what better way can we learn of your problems than from you direct?

100% Free Air Capacity

The Improved STEARNS REGISTER

Just Out—



THE finest job of free air capacity designing on the market.

No loss of strength—

No loss of neat appearance—

It's the one register that gets the air across and still does not look like a hole in the wall. Write for list of capacity sizes today.

Our production facilities have been increased and we can now take care of additional business. See the Improved Stearns Register now.

Our selling plan saves you money.

Write for our catalog and prices.

Features

100% Free Air Capacity

The enlarged openings have increased the free air capacity so that we now can guarantee full capacity. For example 9x12 Baseboard Register has 73 sq. inches and is intended for 9" pipe which has a capacity of 63".

Exclusive Patented Operating Device

The only operating device of its kind on the market. It does not use springs or tension. Simple and effective.

Superior Finishes

The highest type of finishing is used on Stearns Registers. They are furnished in all the regular electro-plated effects. Also finished in popular lacquer finishes such as Brush Brass, Antique Brass and in perfect replica of Oxidized Copper. These lacquer finishes sell on same list price as White Japan.

Quality Construction

Stearns Registers are sturdily constructed in every respect. They are exceptionally good looking and suitable for the finest homes.

Sales Policy Lowers Cost

Let us send you a sample together with our prices. We will show you how you can buy first quality registers at a saving by taking advantage of our sales policy.

STEARNS REGISTER COMPANY
617 Fort Street
Detroit, Michigan

Don't Mistake False Economy for Good Judgment



Don't be blinded by his ballyhoo of smart buying—of savings and profits. You cannot save—you cannot profit by substitution of quality for price. False Economy hides under a clever mask. But don't mistake him for Good Judgment.

Compare Lamneck Products with others in appearance, in materials, gauge and workmanship. Put them together. See how snugly and sturdily they fit. Do this. Write for a sample. Get our catalog. Just fill in or pin to your letterhead and—

**Mail This
Coupon Now!**

THERE is only one safeguard against the disastrous pit-falls of False Economy. That is strict adherence to a quality standard of proved worth.

Compare the product before you buy. We welcome it. Examine Lamneck products from every standpoint. Compare them with others.

Have us tell you of their time and money saving features. Have us show you how they cut stock investments in two.

Lamneck Pipe and Fittings are sold

at quantity production prices—prices as low as good products can be sold. To build better products and sell them for one penny less is an economic impossibility.

They are designed by skilled engineers, made by expert labor and turned out on patented machinery especially designed for the purpose. Skill, experience, and expert workmanship can make no better.

Lamnecks save valuable time, stock investment and dissatisfaction. Our 48-Hour Service backs the line itself. Write for samples or catalog.

THE W. E.
LAMNECK CO.

Gentlemen:

Kindly send me at once, free and without obligation, the items indicated below:

() Your New Catalog.

() Sample of

Name.....

Address.....

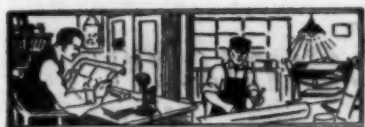
THE W. E. LAMNECK COMPANY

416-432 Dublin Ave., Columbus, Ohio

Western Representative: THE QUICK FURNACE & SUPPLY CO., Des Moines, Iowa

LAMNECK PIPE AND FITTINGS

Mention AMERICAN ARTISAN in your reply—Thank you!



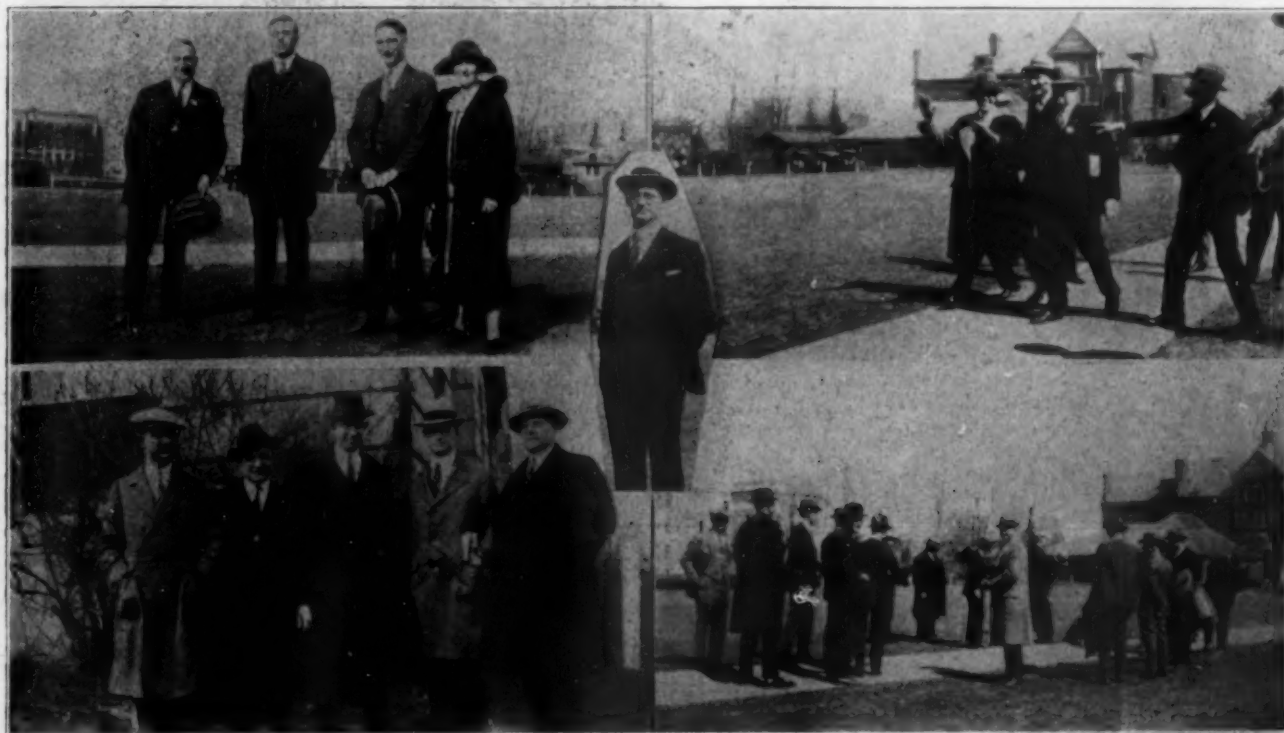
American Artisan and Hardware Record



Vol. 91.

CHICAGO, MARCH 27, 1926.

No. 13.



A Group of Iowa Sheet Metal Contractors on the Campus of Iowa State College, Where the Short Course in Sheet Metal Was Held During the Recent Convention. The Insert in the Center Is None Other Than the Association President, Walter P. Grissell. They All Appear to Be Happy.

Iowa Contractors Hold Sheet Metal Short Course at Iowa State College

Course So Beneficial That It Is to Be Made a Regular Thing in Iowa

THE Iowa Sheet Metal Contractors' Association undertook an experiment this year at their annual convention, held March 22 to 24, inclusive, which proved very successful—an experiment which will prove of value to sheet metal men in general. In coöperation with the Iowa State College a Sheet Metal Short Course was held at the state college at Ames. The sessions were in Engineering Hall.

President Walter P. Grissell made a fine address of welcome.

The program opened on Monday afternoon with a talk—called “An

Inspirational Talk”—by Professor Royal H. Holbrook of the Engineering Extension Department of Iowa State College. After extending a few words of greeting, he surprised all by reminding them that they were now attending school in the greatest college of its kind in the world and one particularly well known for its “Short Courses” for the many industries in Iowa.

In order that all may know the true meaning of “Short Course,” the speaker said that usually there were three ways of getting education from a school of higher learning

and they were: To attend the school; to take a correspondence course; and then the “Short Course,” which means to set apart a certain time (two, three, four or five days or week) for intensive study, at which time special subjects will be treated by the members of the college faculty or other selected authorities. In this line of work, the “pupil” goes to the college or the college will go to his city or home and give the talks.

The college wants to assist all of the industries of the state and, in order to get into direct touch, gives



Some of These Sheet Metal Contractors Look a Little Serious, Others Appear Extremely Happy. So It Is to Be Inferred That a Lot of Fun Was Had and a Lot of Good Things Were Learned at This Convention.
The Smiling Gent in the Center Insert Is W. A. Konneman, President of the Auxiliary.

these "Short Courses" and thus gets well informed of the actual problems confronting each particular line of activity.

For years there has been a tacit understanding that this line of business could be helped, but not until now was the time ripe for such an action.

Mr. Holbrook assured all that they could depend upon the college in giving them all of the help and encouragement possible and in return asked all present to make it known that such service was needed.

Following immediately after Professor Holbrook came the address of George L. Bennett, director of Building Trades Extension Bureau Sheet Steel Trade Extension Committee, who spoke very ably on the development of the use of sheet steel. What Mr. Bennett said, in part, follows:

The principal trouble with steel in the past has been that we have *never* really recognized the true value of steel—never given it the credit it ought to have. Steel needs a consciousness of steel. A knowledge of what there is in it to help us.

Steel is gradually taking the place

of lumber. Within five years it will almost entirely take its place in house building. In the days of the old guilds, to become an artisan it was necessary first to serve a term of apprenticeship, then journeyman, and finally, after years of study and training, master.

The artisan of the old days first was loyal to his trade, then loyal to his town. Every bit of workmanship was carefully examined and destroyed if not perfect.

Within a short time the Sheet Steel Trade Extension Committee will have for publication the results of roofing tests made at Washington on wood, asbestos, metal, slate and terra cotta roofing. When the results of this test are made public it should place the sheet metal roof where it belongs.

Recently there was a conflagration in Shreveport, Louisiana, and the total loss amounted to \$700,000. The insurance was \$200,000. The building commissioner wrote a new ordinance demanding that roofing be made of a non-combustible material. The lumbermen fought it, but were not successfully as one of the principal points brought out was the

enormous saving in insurance over the wood shingled building. Sheet metal earns its own way.

Two years ago the economic god was competition. Competition turns one man against another—makes the third man believe that neither is right. Competition is a weakening force. There are many noble, uplifting enterprises you could do, but you don't because your competitor won't work with you and you can't afford to do it alone. In the Sheet Steel Trade Extension Committee twenty-nine competing companies have joined hands to fight a common foe.

Coöperation must be substituted for competition. Coöperation uplifts. Competition drags down. Coöperation brings men together and does things for the whole industry.

The sheet steel mills recognize the fact that the jobber and the contractor are as much a part of the industry as they themselves. They cannot succeed alone and must have coöperation.

If the sheet metal contractor won't coöperate the mills cannot get anywhere. It is easy enough to

arouse enthusiasm in artisan workmanship, but how many of you men present are giving constructive thought to merchandising? If you are not a merchandiser yourself, then let me suggest that you remain the artisan. Get some good live young fellow who has merchandising ability to join you in your business—if necessary, make him a partner. If you concentrate on gutter work or furnace work and don't pay any attention to cornices and interior work, you are missing your best bet. Everything shows that very soon buildings will be of steel and cement. Don't let the lumberman take away your trade.

The manufacturer's problem is the creation of consciousness of sheet steel on the part of the public, the recognition of steel as the friend it is. This is being done by popular advertising in magazines totaling ten million circulation. It is up to the sheet metal contractor to get "off the fence."

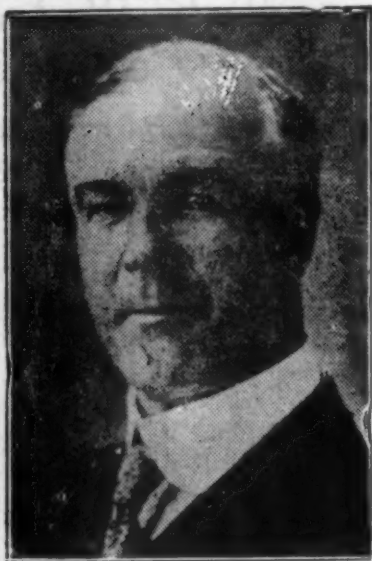
Steel is the strongest cheap material. There is an active campaign on to make better sheet steel. The Master Brand is going to mark the standard gauge of lowest material to be permitted. Field men will go around to inspect steel in the plants, the jobbers' warehouses and in the sheet metal shop. Any manufacturer found not making steel up to standard will lose the right to use the Master Brand.

The influence of the architect is vital. The Sheet Steel Trade Extension Bureau is using quite a bit of space in Sweet's Architectural Catalog to arouse the interest of the architect. It is up to each individual sheet metal contractor to go to the architect in his town, talk to him like a brother and show him how he can save money by using sheet metal cornices and have money left to use elsewhere. It will widen your field and broaden your trade if you will figure on metal cornices, but when you figure on metal cornices remember to figure against terra cotta and not against metal.

Lumber yard competition is a serious question. With the passing of the wood shingle and the wood interior work, the lumber man is

going to look for something to take the place of lumber and it is up to you to see that he doesn't take your rightful place in the building field. You cannot accomplish this singly, but can through organization, and coöperation between the manufacturer, the jobber and contractor.

A very fine banquet was held in the evening of Monday, arranged by W. R. Haines. The versatile Blair Quick was the toastmaster. Mr. Quick called upon President Sauerwein of the Travel-speakers were W. R. Haines, Prof. A. H. Kimball, Ray E. Pauley, Arthur Lichty, Professor Kratz of



ROYAL H. HOLBROOK

Engineering Extension Department
Iowa State College
Ames, Iowa

the University of Illinois research staff, Professor Holbrook of the State College at Ames, and Miss Etta Cohn, AMERICAN ARTISAN.

Tuesday morning Professor A. P. Kratz of the University of Illinois was the first speaker. Professor Kratz outlined briefly the results of the warm air furnace research work that is now being carried on at the University of Illinois. Many lantern slides were used by Professor Kratz to make his lecture more clear to the audience.

Following the talk by Professor Kratz, many of the problems now confronting the industry were undertaken. Many questions were asked and cleared up for the delegates.

The first speaker of the afternoon was Homer F. Brundage, past president and a director of the Michigan Sheet Metal and Roofing Contractors' Association, who spoke on the opportunities of the sheet metal contractor of today. Excerpts from Mr. Brundage's address are printed under a separate head on pages 21 to 23.

President Langenberg of the National Warm Air Heating and Ventilating Association also gave a very interesting talk.

Mr. Langenberg commenced his talk on Overhead by first of all urging the sheet metal contractor and furnace man to read the trade papers regularly and carefully. He said be careful not to take everything as a whole. Sit down and analyze your cost—in overhead there are some items that are liabilities and others are assets. Among the overhead liabilities are rent, insurance, interest on money, printing and stamps, etc. Overhead assets include telephone, which can be used to advantage to secure new business; some of your insurance; your mailing list; your membership in local Chamber of Commerce, your trade association and different civic organizations, etc.

When you discover a leak—stop it at the source.

Investigate the products you handle.

Pay your bills promptly.

Estimate jobs carefully and use printed forms for your estimates.

Don't make hasty estimates.

Get new ideas from salesmen who call on you.

Use your 'phone to sell.

The last speaker for the Tuesday morning session was Henry Giese, assistant agricultural engineer, who read a paper on "The Ventilation of Animal Shelters."

In common parlance, this subject means the movement of air in barns, pig pens and chicken coops. For many years this subject has been discussed by farmers and sheet metal workers, but with little real results.

In the past few years the engineering departments of our agricultural colleges have been doing con-

siderable research work on "ventilators," with the conclusion that they are good and indifferent. On account of the length of the particular paper it will appear in the columns of this paper in a coming issue.

Especial attention was called to the following bulletins on this subject:

"Dairy Barns and Equipment"—Circular 93.

"Why Ventilate Farm Buildings and How"—Extension Service Bulletin Number 106.

Book from Iowa State College, Ames, Iowa.

"Principles of Dairy Barn Ventilation," from U. S. Department of Agriculture, Washington, D. C.

"Comparative Tests of Automatic Ventilators"—Bulletin Number 14, Kansas State College of Agriculture, Manhattan, Kansas.

Tuesday evening the contractors and salesmen met again at a "get together" dinner at the Sheldon Munn Hotel, followed by a business meeting. The evening was devoted to informal discussion and the laying out of plans for 1926. The Short Course given through the courtesy of the Iowa State College under the guidance of Professor Holbrook was pronounced a real success and it was unanimously voted to make the Short Course a permanent institution—the annual meeting of the association to be held at the same time.

A number of dealers not affiliated with the Iowa Sheet Metal Contractors' Association who had been fortunate enough to attend the meeting immediately handed in their membership applications.

The annual outing, it was decided, will be held at Dubuque, Iowa, some time during June.

The officers who were elected to guide the association during the coming year are as follows: President, Walter P. Grissell, Cedar Rapids; vice-president, Ed. Gertz, Davenport; secretary, R. T. Northrup, Fort Dodge; treasurer, J. A. Backman, Des Moines.

Directors: J. E. Johnson, Sioux City, one year; John G. Wright,

Waterloo, two years; Chas. Graham, Oskaloosa, three years.

Professor Holbrook and Miss Etta Cohn of AMERICAN ARTISAN were unanimously made honorary members of the Iowa Sheet Metal Contractors' Association with full privileges of regular members.

With a vote of thanks to all those who had made a success of the Short Course, and with a special vote of appreciation to President Walter P. Grissell, the meeting was adjourned to meet Wednesday

morning at the college.

Wednesday morning's session opened with D. C. Faber of the Engineering Extension, Iowa State College, on the "Relation Between Temperature, Humidity and Comfort." The address was very well received.

A film was presented by the American Rolling Mill Company, showing the processes in the manufacture of steel galvanized sheets, which was very much appreciated by the audience.

Iowa Travelers' Auxiliary Members Take Pledge to Assist Iowa Sheet Metal Men

Elect J. "Harry" Hussie to Honorary Membership—Auxiliary Presents Contractors With Check

ON TUESDAY morning, March 23rd, the Salesmen's and Travelers' Auxiliary of the Iowa Sheet Metal Contractors' Association held their usual peppy annual meeting.

The principal topic of discussion was "How Can We Help the Contractors Increase Their Membership?" Each and every member pledged himself to do his best during the coming year to interest his dealers in the parent association.

Inasmuch as the 1926 convention of the Iowa Sheet Metal Contractors' Association was in the form of a Short Course at Iowa State College, there was no program of entertainment and consequently no expense to the Auxiliary. Therefore, it was decided to present the contractors' association with a substantial check.

By unanimous vote, J. "Harry" Hussie of Omaha was made an honorary member for life of the Travelers' and Salesmen's Auxiliary of Iowa.

After reading of reports and correspondence, President Sauerwein appointed the following committees.

Auditing Committee.

F. J. Kiessel, J. R. Morgenson, Blair A. Quick.

Nominating Committee.

Edson Perry, Blair A. Quick, Ed. Hunter.

Resolutions Committee.

Etta Cohn, O. S. Stansberry, Louis Roos.

Officers for the ensuing year were elected as follows: President, W. C. Koenneman; vice-president, F. J. Kiessel; secretary, H. J. Somers; treasurer, Etta Cohn.

Resolutions were adopted pledging coöperation with the contractors, thanking the Iowa State College, R. S. Holbrook and the different professors and all others who aided in making the Sheet Metal Short Course at Ames a success.

Kothe Tells Dockery to Purchase a Few Sprays Such as Used on Air Washers

The L. J. Dockery Heating and Sheet Metal Works, 3615 Easton Avenue, St. Louis, writes: "Can you give us any information as to how to make a dust collector with a spray to moisten the dust coming from a carpet cleaning machine so that the dust will be carried off through a sewer connection?"

O. W. Kothe, Principal of the St. Louis Technical Institute, St. Louis, writes:

"Responding to the inquiry of L. J. Dockery, St. Louis, for a spray to remove the dust from carpet sweeping apparatus, will say, it is a simple matter to purchase a few sprays such as are used on air washers for heating systems and connect them to a water line of suffi-

cient pressure, building a box around the discharge pipe. In this box should be placed eliminators to remove the moisture, and the water can be drained much like steam valves drain their surplus water from drains, by means of a float valve."

Michigan Sheet Metal Association Doing Much for Its Members*

Organization Has Justified Its Existence in Many Different Ways

By HOMER F. BRUNDAGE, Director Michigan Sheet Metal and Roofing Contractors' Association

IT GIVES me great pleasure to come to Iowa as I feel as though I have some claim on this state, having spent two years in college at Grinnell and having had a cousin and two brothers graduate from Grinnell, my cousin in about 1903 and one brother in 1907 and the other in 1910. This is the first time since I left in 1910 that I have had an opportunity to visit the state so, as I said, it is certainly a genuine pleasure for me to be with you on this occasion.

I do not want you men to labor under the apprehension that the making of an address is either a vocation or an avocation of mine. I am just a sheet metal contractor in the city of Kalamazoo, Michigan, trying to conduct an honest business, trying to make my business grow a little from year to year.

In coming from Michigan as I do I presume you will be interested in some of the history and development of our association and some of the things we are endeavoring to accomplish.

In 1911 at Battle Creek the dealers of that town conceived the idea that they would get farther and serve the public better by co-operating with one another, rather than to be continually fighting and

avoiding one another. From that conception grew the idea of our association. Invitations were immediately sent out to practically every dealer in Michigan, asking



Homer F. Brundage

him to be in attendance at a meeting called in Lansing. No one attended that meeting except the Battle Creek delegation and a few Lansing dealers. The Battle Creek men were not discouraged, but set about getting a representative crowd out to a meeting which was

to be held in Grand Rapids the following year.

While the meeting in Grand Rapids was not large, what it lacked in numbers was made up in enthusiasm, and our association has been progressing ever since. Local associations were formed in practically every important town, and now we have ten of them. A firm desiring affiliation with the state association must first affiliate with the local if there is a local in his town.

Our governing body is a board of directors, which consists of the president, vice-president, secretary and treasurer, together with six directors holding office two years, three being elected each year so that we do not have an entire new board each year.

In 1917 the duties of the secretary became so strenuous that no one wanted the job. Arrangements were made with the firm which was employing Frank Ederle to have him become our secretary, in addition to his duties as traveling salesman. This arrangement continued until 1921, when Mr. Ederle resigned his position as salesman and became our full-time secretary, which position he still holds. The activities of our association have grown to such an extent that we were forced in January of this year to employ a full time assistant secretary.

Almost from the beginning of our organization, the study of the overhead or expense problem was taken up. Until that time few contractors had ever heard of such a thing even among the larger and more successful operators. Our association, in connection with this movement, had printed a Standard Cost Sheet, which was sold to our members at actual cost and our secretary instructed the dealers in its use. And on account of these two things, that is the learning of overhead and the introduction of cost systems in our shops, the dealers of Michigan have made thousands upon thousands of dollars of profit that they were justly entitled to.

*Address of Homer F. Brundage, Kalamazoo Blow Pipe Company, Kalamazoo, Michigan, delivered before Iowa Sheet Metal Contractors' convention, held at Ames, Iowa, March 22 to 24, 1926.

While I am not here for a discussion of the overhead problem, I might mention three or four equitable ways for figuring overhead. One is to figure a percentage on sales. This figure in the sheet metal contracting business should not run over 20 to 25 per cent. There is one objection to this method of figuring, because it is not always clear to the estimator how to go at it to obtain this figure before the selling price is obtained.

Another method is to figure overhead on the per hour per man basis; that is, divide your total expense for the year by the number of productive hours for the year and you have the overhead expense charge for each hour of labor for each man. There is considerable in favor of this method, due to the fact that there is a greater percentage of overhead charged against a helper who requires more supervision than the experienced mechanic.

The third method and the one which is generally taught and used in Michigan is the percentage of overhead against productive labor on the dollar and cents basis; that is, divide your total expense by your total productive labor and you get the percentage of productive labor to figure for overhead. It has been proved that by this method the average overhead in the average shop will not vary materially from 100 per cent of the direct labor. In other words, when you have secured your labor cost on a job, it is a simple matter to double it and you have your total cost. All that then is necessary is to add the desired amount of profit and you have your selling price.

Probably one of the most noticeable achievements of our association in the interests of its membership are the savings effected on insurance, both fire and compensation. Several years ago our secretary made arrangements with certain fire companies whereby our members could secure fire insurance at one-half the conference rates. A large number take advantage of it, resulting in a total

annual saving of thousands of dollars.

Next, we went into the matter of compensation insurance, which in our state was and is still a very expensive proposition and which we are compelled by law to carry. While our saving is not quite so great as on the fire insurance, we are about 25 per cent under conference rates. But the thing of interest in connection with this is the fact that when our company found it justifiable to drop our rates, conference rates usually dropped also, so that a sheet metal contractor can step out in Michigan and secure old line compensation insurance for a lot less money than he would have been able to if it had not been for the activities of our association.

We are now starting to study group insurance on automobiles for our membership—a blanket policy which not only includes owner and company cars and trucks, but the employees' cars as well, for in our state if your employe should happen to be using his own car on your business you are responsible for any accident that might occur.

In 1921 our Trade Extension Board was organized. This board, in addition to our state secretary, consists of one member from every local association. Most of you men will recall the rottenness of the iron that you were receiving about this time. You were being called back to reinstall eavestrough and downspouts which had only been up two and three years. You will remember that you were getting hard and brittle sheets.

At this point we called in representatives of several mills and jobbers who were selling material throughout our territory. We had several meetings, in fact, to determine what could be done toward bettering materials. We could not seem to get anywhere so we decided to take the "bull by the horns" and bring out our own galvanized sheets under our own trade mark and made according to our own specifications, and secure some mill to make the same for us. It ap-

peared later that this was a very daring step for out of all the mills in the country we found only one which was willing to co-operate in our efforts toward uplifting and saving an industry. (They woke up, however, about three years later and formed what is known as the Sheet Steel Trade Extension Committee which you are all familiar with. The only difference between them and us is that they have about a million dollars to spend where we have possibly a hundred.)

Our mill connection lasted about one year and they decided for some reason or other that they could not make this material for us any longer. We were not discouraged, although it was several months before we secured our present connection, which, by the way, has been a very satisfactory one and one which has co-operated in every way in our efforts towards better materials and workmanship. Twenty-six gauge is the lightest material which is made in our Michigan Standard iron. Every sheet is die stenciled with our trade mark, gauge number and the name of the mill producing it.

We also feel that due to our activities the buying public is gradually regaining confidence in the use of sheet metal, and that much more is being used than would have been if steps had not been taken to curb the operations of the unscrupulous manufacturer, jobber and dealer.

There is another item used quite extensively in sheet metal shops which the most of us know very little about and which is probably one of the most abused materials which the sheet metal man has to contend with—paint. Paints are being sold on the market all the way from \$1.00 to \$4.00 per gallon, and the chances are, ten to one, that the \$1.00 paint is as good as some for which you pay \$2.25. Most of us trust to the honesty of the manufacturer supplying them; whereas, if we would take the trouble to have some of the paints analyzed, we would find that in a number of instances we were being robbed.

To eliminate this situation and get a proper paint and the proper price for the material we were getting, we decided after about two years' study to bring out a galvanized steel primer which we did last fall.

We also try to encourage and assist trade schools, whether they be public or private. We have too few first-class mechanics, and anything that will encourage the helper to perfect himself is worthy of the support of every one of us.

The fact that our association is so thoroughly organized has made possible very warm friendship, not alone among competitors in the same city. This in itself tends to eliminate the evil of price cutting, although none of us could expect that it would make the elimination 100 per cent.

You probably know by this time that I am thoroughly sold on well organized associations. It is a worth while proposition, men; boost for it and stay by it, even in the face of great discouragement; it will pay you big dividends in the long run. Get your competitor to become a member, you have a much better chance to educate him if he is in the association than you have if he is not.

I wish to commend to you the activities of the Sheet Steel Trade Extension Committee and the Copper and Brass Research Association. Both of these organizations, of course, represent the manufacturers and their motives are more or less of a selfish nature, but, nevertheless, they have a deep-seated interest in your welfare and are spending not thousands of dollars, but millions, to eliminate inferior materials; to help raise the plane of industry and are endeavoring the best they know how to increase our markets. As H. S. Rogers of the Sheet Steel Trade Extension Committee so ably summed up their activities in his address before the last Michigan convention held in Battle Creek as follows:

1. To regain lost markets for

sheet steel products, such as cornices and tin roofs.

2. To create new markets for sheet steel products.

3. To create new sheet steel products for already existing potential markets.

Now, getting down a little closer to the individual business. It seems to me that the opportunities were never so great as they are at the present time in the sheet metal contracting business. But we have got to be merchandisers of our products, we cannot wait for the customer to come in and beg us to install a furnace or have a piece of gutter installed for him, or to figure out for him how to handle some ventilating problem. We have got to employ business methods. The day is past when we can lock the doors of our shop and be gone for an hour or so on business or pleasure and expect to retain our customers.

Accurate well kept cost records will check errors before any serious damage can be done.

You must not be afraid, if you expect to continue to grow, to employ specialist salesmen if your clientele demands it. For instance, if your company handles a large amount of industrial work, it may be necessary to employ an engineer, in order to get in on the cream of your customer's business which may at the present time be going to out of town sources because you are not capable of figuring out the proper job. It may be your furnace department and your sheet metal department have grown to the point where they are at a standstill due to the fact that there are not two of you to be in two different places at the same time. If that situation occurs, employ a competent furnace salesman to relieve you of part of the burden, so you can further extend your activities in the other end of the business. In other words, men, you must use your head instead of your heels if you expect to develop your business to its fullest possibilities.

Do not be afraid to install equip-

ment if in your judgment, there is enough business available to justify its purchase. Often times a piece of equipment will pay for itself on one job. Give special consideration to power machinery. You must continually be putting money back into your business if you expect to continue to grow. If you don't your competitor will and your customer likes to do business with a well equipped and well kept shop because he knows that in the long run he will save money.

In closing I desire to say that the grass usually looks greenest on the other side of the road, while opportunity may be right at your door and possibly all that you have to do is to open your hand and receive it. Be open-minded, you might catch an idea some day that you can cash in on. Size up your field carefully, there may be a lot of business escaping you because you do not see it.

American Zinc Institute to Issue Treatise on Zinc's Corrosive Resistance

The American Zinc Institute, owing to the growth in the number of inquiries being received by it, is planning to issue soon for general distribution to the trade and members of the technical and scientific professions a publication on "Zinc and Its Corrosion Resistance." This work will consist of a fairly complete and comprehensive bibliography, accompanied with abstracts of the important articles and statements giving the results of investigations, surveys, researches and studies on the subject.

This important work is based upon a preliminary report issued in 1924 by the National Research Council and has been made by The Research Service, Inc., of Washington, D. C., under the immediate direction of Mr. A. B. McDaniel, Secretary-Treasurer.

This report will make a distinct contribution to the field of knowledge of Zinc, with special relation to its properties and uses, especially in building and other trades.

Showing How to Lay Out Pattern for Round Bottom Sheet Metal Boat

Men With Turn for Mechanics Will Have Little Difficulty in Visualizing Boat Shape

By O. W. KOTHE, Principal, St. Louis Technical Institute.

QUITE a few folks have asked about the construction of sheet metal boats, with the desire to know how to make them. Therefore these drawings have been prepared with a view towards demonstrating the work. Making boats is experimental and it is especially difficult if a person is foreign to such work, especially if geometry is foreign to him.

Here is a case where a good fundamental training in geometry limbers up the brain to a point where he can visualize various lines and positions, and this aids him in determining in numerous way of arriving at them.

Thus, a boat fourteen feet long, three feet six inches wide, and about twenty inches deep is the proportion we use in this case. The measurements may be made to any scale you desire.

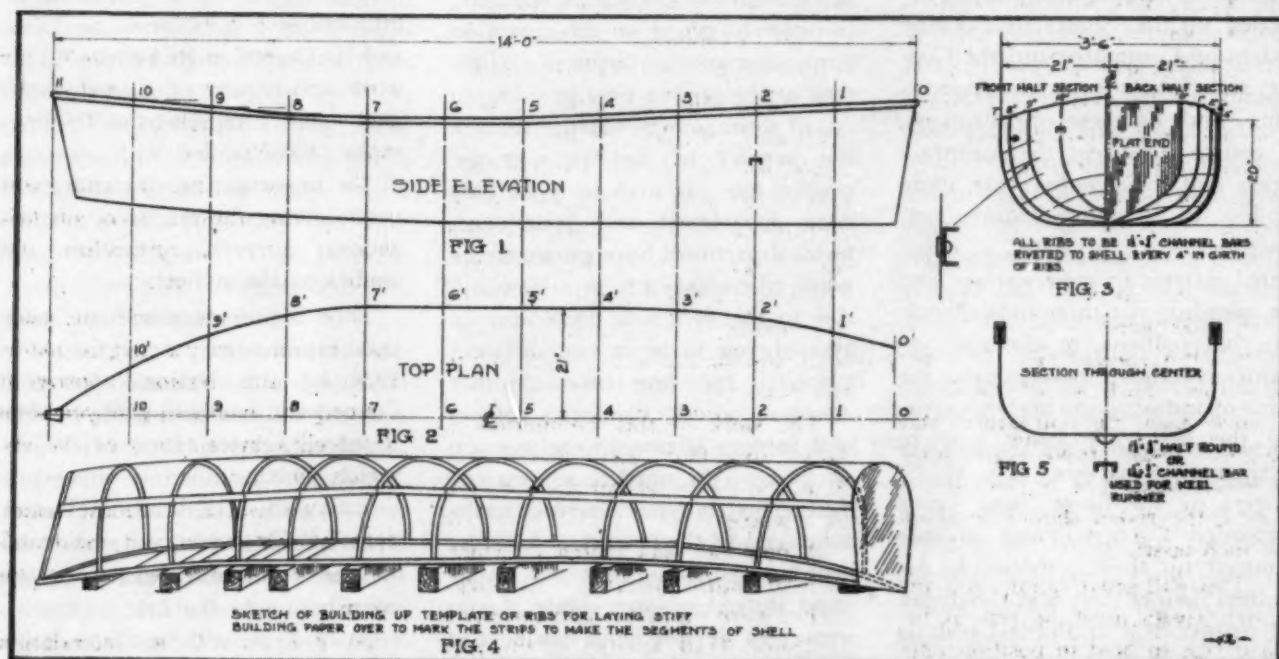
First draw the side elevation for length and depth, sketching in the

raising of the bow to what you feel is good form. Do the same thing with the back end. This is largely a guess proposition and for this reason it is well to draw your working drawing to a scale of three-quarters or one inch to the foot. This enables rescaling the frames and working them out to full size without making the side elevation or plan to such large size.

Next draw a center line for plan and measure half the width and draw part of the side parallel with the center. After this sketch the curve of the bow and the stern to a gradual curvature that is graceful and still not too pronounced or blunt. Now divide the horizontal line of elevation in any number of equal spaces; that is, to average the length up as becomes the distance between frames or cross braces. These are ordinarily made from twelve to eighteen inches apart or about fifteen inches in this case.

These lines represent either wood braces or channel bars, as the sections in lines 2 and 10 indicate.

Through each of these pass vertical lines through the elevation and plan so that frame lines will be uniform in both views. Next develop the end view, Figure 3. Here we draw a vertical center line and then pass horizontal lines from each point of the side elevation through the end view. Now observe, the plan lines give outside shape and the spread of the frames as 10-10, 9-9, 8-8, 7-7 feet, etc., to 3-3, 2-2, 1-1 and 0-0 feet will form the half widths for the end view. So pick these lines from plan and set on horizontal lines from center line and so establish points 7, 8, 9 and 10 inches; also 0, 1, 2, 3 and 4 inches. After this we sketch in the frame lines as shown, making them as uniform and regular as possible. This is the form the ribs or frames will take and considerable care must be



Laying Out of Round Bottom Boat

taken to sketch them in so a graceful appearance is made. On the one half we have the front half or bow, while on the other half we have the back half or stern.

When these shapes are sketched in to suit your taste, then you can detail this view full size and so measure for the full sized ribs. The channel bars would be measured off so the heel will pass along these lines and later these channels would be bent exactly as the lines of this end view show. That is, the bars or ribs would be bent and laid up against these lines for trials to see that they match up well.

After this you can build the skeleton frame as shown in Figure 4. Here the ribs are set on timbers or any superstructure and anchored at both the bottom and top, so they line up exactly with the outline of side elevation, only upside down. Strips can be bolted on the sides and top or bottom so a uniform space is made and so all ribs are rigid. When this skeleton is set up you can then take strips of building paper and cut it to a width so no bumping is required and still make the curvature, as the strake line in Figure 3 shows. This is an experimental proposition and it can be done in any one of a dozen ways; in fact, any way just so you mark out your strakes.

Possibly as good a way is to mark each rib as the strakes in Figure 3 show and then get underneath and one man hold the strips on top while another marks the cut line on the bottom. In this way this paper template is cut out or the metal pattern is prick marked out from it. Each strake must be put on one at a time after measuring. It is not possible to mark all of them out at once since the curvature may change. These strake edges must be double seamed or riveted, and if riveted, the rivets should be about one inch apart.

This will prove quite a job and enough rivets must be put in between ribs to hold in position until all the strakes are built up and until the shell for boat is finished. Then

it is taken off from the frames and securely riveted and joints well soldered. After this each frame must again be fitted in place and riveted about every four inches apart.

Observe a considerable portion of the bottom can be a flat piece from the back to the front, and if both halves are worked equally, then only one pattern need be marked off. For the keel a one and one-half inch three-eighths bar iron can

be riveted from the back leading up the front post, or a channel bar can be used if desired. For the side rails, wooden strips can be screwed or bolted together and a top strip screwed over, as shown in Figure 5.

The rest of this work is mainly work and worry and any person with a good turn for mechanics can invent ways of doing things that are difficult to explain. Folks that make such boats for a living have, of course, their own system.

Branch No. 1 Cook County Sheet Metal Club Appoints Trade Relations Committee

To Hold Future Meetings in Immel Hall, Belmont, Elston and California Avenues

AT the meeting of the Cook County Sheet Metal Club, Branch No. 1, held March 19, 1926, there were approximately forty members in attendance. This large turnout at each meeting indicates that these men are exceedingly interested in their organization.

A very important accomplishment was realized at the meeting. A Trade Relations Committee was formed consisting of five members. Edward N. Stahler, Secretary of Branch No. 1, was made Chairman of the committee.

The purpose of this committee is to iron out the difficulties between the manufacturers and the dealers. Two men on the committee will take up the work in the sheet metal end of the business, while two will do the same with the furnace dealers and manufacturers. Edward N. Stahler, the committee's chairman, will supervise the work of the two branches.

The work of this committee is very important and should redound to the benefit of the industry as a whole.

A new hall was rented in which to hold future meetings. Arrangements were made to hold meetings in Immel Hall, located in the Immel State Bank Building, at Belmont, Elston and California ave-

nues, Chicago. The next meeting, Friday, April 2, will be held in this new hall.

These men are getting behind the Standard Furnace Code with a will and are sure to put it over.

Here Are Ten Reasons Why You Should Attend Missouri Sheet Metal Convention.

April 5 and 6 are the dates of the Missouri Sheet Metal Contractors' convention at Springfield, and here's why you should attend.

1—You will learn something new about your work that will enable you to carry on your business in a more profitable way.

2—You will come in contact with your fellow workers, who will help you to solve the difficulties that come up in your business.

3—You will meet with the salesmen of some of the largest manufacturing and jobbing concerns in the country, who will give you some worthwhile information on the materials you use.

4—You will see the most beautiful city in Missouri, and, incidentally, one of the most beautiful in the country.

5—You will be entertained royally.

6—You will form friendships

that will be not only a pleasure to you, but a lasting asset.

7—You will leave refreshed and come home enthusiastic enough to tackle the most arduous task in your business.

8—If you are not a member of the Missouri Sheet Metal Contractors' Association, become one now, and reap the benefits of the insurance which will net you a saving of 20 to 35 per cent a year on all of your insurance.

9—The secretary has made arrangements for all forms of in-

surance, of automobile insurance, namely, public liability, property damage, fire, theft, collision, tornado, plate glass insurance; teams, public liability and property damage insurance; elevator and general liability insurance, and fire insurance on your shop and your home, and all other forms of insurance now in existence.

10—Come and join this association and get the benefits, like your neighbor, and one year's insurance will more than pay your association dues.

Ohio Sheet Metal Jobbers' Auxiliary Making Strong Membership Appeal

Letters to Members and Prospects Urge Working for Good of Industry

THE Jobber's and Salesman's Auxiliary of the Ohio Sheet Metal Contractors' Association is making a strong appeal for new members at this time. Two letters are being forwarded to present and prospective members through the office of the secretary which it is believed will bring about the desired result. The letters, which follow, are signed by Lee W. Gillespie, President, 1612 Clarewood avenue, Cincinnati, and R. S. Thompson, Secretary-Treasurer, 1815 College avenue, apartment 4, Indianapolis.

"The Ohio Sheet Metal Contractors' convention held at Toledo is over, and was one grand success. We had the largest attendance in the history of the Association, and it is up to you to help us make this the largest year in the history of the Auxiliary.

"A motion carried to the effect that a new and complete roster be issued within sixty days after each convention. In checking over registrations we find you were not present, and we feel sure you desire to be a member of the Auxiliary and be shown on the new roster we are now preparing.

"We want to impress upon you that fifteen hundred sheet metal shops in Ohio will receive a copy of this roster. The five dollars

spent for membership is returned many times over in the good will created for you and your company among the trade. From an advertising standpoint it puts your's and your firm's name before fifteen hundred dealers in Ohio for one year.

"The Auxiliary will take complete charge of one evening's entertainment at the next convention and it is necessary that we have your help.

"Will you please fill out enclosed application giving name of firm represented and address as well as your own with home address and return with check at once, as we must get this to printer by first of April.

"Trusting we may have your support and early reply, we remain,"

The second letter runs as follows:

"Your new officers appreciate your attendance at the recent Toledo Convention. Any organization is a success only to the extent of the effort back of it by the entire personnel. Your presence is proof of your support to the Ohio Sheet Metal Contractors' Association, and the Auxiliary to which you belong.

"The Auxiliary registration at Toledo was the largest we have ever had. We must make this the banner year of all. And your help is

absolutely necessary to put it over.

"We feel that every interested member can get at least one new member. With this letter you will find two applications and we are depending on you to use one if not both.

"Think this over! If each Auxiliary member would get one new dealer to join the Ohio Sheet Metal Contractors' Association this year, what a wow of a convention could be held next year.

"Where there's smoke there's fire. Long may your chimney smoke."

New Orleans Sheet Metal Association Sponsors National Good-Fellowship Fraternity

Convinced through its own experience that where a substantial social relationship exists between members of a trade, there also exists a better commercial relationship, the New Orleans Sheet Metal Contractors Association is sponsoring the formation of a national good-will organization of members of the National Association of Sheet Metal Contractors. Permanent organization will be effected at the annual convention of the National at Louisville Ky., May 24-28.

Under the interesting name of the Mystic Order of Metal Macacos it will be the purpose to bring the good-fellows of the sheet metal trade attending the convention together for a more personal relationship than usually exists at business conventions that a better acquaintance will lead to better understanding and greater co-operation in the work of the Association.

While we are not privileged to disclose the details concerning the Metal Macacos we understand the name is taken from the ring-tailed Lemur, a small nocturnal animal allied to the monkey. In Roman mythology the lemur was supposed to be the ghost of those who had no burial and were therefore ever living and forever bringing mischief to the world. The feast of the Lemuralia was an annual ceremonial

ritual celebrated by games, feasting and merry making for the purpose of pacifying the Lemurs. We would judge therefore that the Mystic Order of Metal Macacos means mischief and a good time which the New Orleans association which produced "The Tinner Ben Damned" at the Atlanta, assures us is the case and that the high-jinks in connection with the ritual and initiation at Louisville will be one long to be remembered by the fortunate Menshemets who participate. Applications should be made to the New Orleans Sheet Metal Contractors Association, 612 Gravier street, New Orleans, La., for membership, the requirements and qualifications being only that the applicant be a member of the National Association of Sheet Metal Contractors and a good-fellow.

Foster Bolt & Nut Company Expands Chicago and Cleveland Plants

The Foster Bolt & Nut Manufacturing Company has just completed the construction of an additional building at its Cleveland plant. Work will begin about July 1st on the erection of a second new building at Cleveland.

A new modern plant is also being erected at Chicago, to be in operation about May 1st. This Chicago plant will take care of the Western trade of the company.

The officers of the company are, President, A. M. Foster; Vice President and General Manager, J. F. Donahue; Secretary and Treasurer, A. L. Empey.

Who Manufactures Stratford Oil Stove?

TO AMERICAN ARTISAN:

Can you tell me who makes the "Stratford" oil stove?

Very truly yours,

PERCY H. SMITH.

Treating Your Customer and Neighbor As You Want to Be Treated

It is a cinch to do things wrong. To guess and generally "slam bang"

through business is easy; just as it is no trouble at all to lie, cheat and bluff and which, in time, brings its reward-minus.

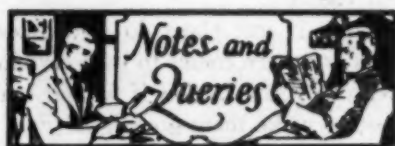
It is hard work, however, to cultivate a habit of doing things correctly and sticking to a principal that is right. To tell the truth, study your business, and be successful. To treat your customer and neighbor as you would like to be treated and establish a "good name" is not easy, but it pays 100 per cent dividends in the end, and the pleasant feeling of progressive accomplishment and acknowledged service.

Matthiessen and Hegeler Issue New Price on Sheet Zinc

In their price list No. 18, Matthiessen and Hegeler Zinc Company, La Salle, Illinois, have announced that effective March 16, 1926, the price on sheet zinc will be \$11.75 per 100 pounds.

James H. Polhemus, New Jersey Zinc Company, Dies

James H. Polhemus, in charge of mines of the New Jersey Zinc Company, New York, died at his Upper Montclair, New Jersey, home recently at the age of 42. He was a native of East Orange, New Jersey, and was graduated from the Massachusetts Institute of Technology in 1906. He was a mining engineer for the American Lead, Zinc & Smelting Company for several years before joining the New Jersey Zinc Company. He belonged to the American Association of Mining Engineers, Mining and Metallurgical Society of America, the American Refining Congress and the Holland Society of New York.



"Positive" Automatic Ventilator.

From Chicago Metal Manufacturing Company, 37th and Rockwell streets, Chicago.

Can you tell us who makes the "Positive" automatic ventilator?

Ans.—The J. D. Gerken Company, 25-29 Ontario street, Toledo, Ohio.

Lamp Guards.

From Coffey Sheet Metal Works, 688 Grand avenue, Wisconsin Rapids, Wisconsin.

Please inform us who makes wire guards for use in protecting lights in a gymnasium.

Ans.—Fred J. Meyers Manufacturing Company, Hamilton, Ohio; Frank W. Morse Company, 289 Congress street, Boston, Massachusetts; McGill Manufacturing Company, 77 Oak street, Valparaiso, Indiana; F. P. Smith Wire and Iron Works, 2340 Clybourn avenue, Chicago, Illinois, and Eclipse Electric Manufacturing Company, Raymond and University streets, St. Paul, Minnesota.

"Karbonite" Soot Destroyer.

From The W. E. Lamneck Company, Columbus, Ohio.

We should like to know who makes "Karbonite" soot destroyer.

Ans.—Utility Products Company, 408 South 18th street, Omaha, Nebraska.

Laundry Dryer.

From J. J. Carney, 36 Park street, Adams, Massachusetts.

Can you tell me who makes the laundry dryer described on page 16 of December 7, 1925, issue of AMERICAN ARTISAN?

Ans.—The W. E. Lamneck Company, Columbus, Ohio.

Laminated Steel.

From Shannon Hardware Corporation, 18-20 West Jackson boulevard, Iola, Kansas.

We should like to know who makes Laminated steel.

Ans.—Bakelite Corporation, 247 Park avenue, New York City.

Turnbuckles for Corn Poppers.

From J. L. Willey, 1728 East 32nd street, Des Moines, Iowa.

Please advise me who makes turnbuckles for use in constructing corn poppers.

Ans.—Thomas Laughlin Company, Portland, Maine.

"Swartwout" Ventilator.

From D. C. Masters, Mt. Pleasant, Iowa.

Will you kindly inform me who makes the "Swartwout" ventilator?

Ans.—Swartwout Company, 18515 Euclid avenue, Cleveland, Ohio.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Cortlye.

F. A. Wilkening of Indianapolis was standing in a small town railway station recently. Suddenly he heard the screams of a young woman on the platform just outside. "Help, murder!" came the excited words. Mr. Wilkening dashed out to see what had occurred and saw nothing but a young woman fleeing for dear life. There was no one in particular in pursuit of her. Curious to know just what had happened, Mr. Wilkening inquired of a brakeman working around a freight train if he knew the cause of the young woman's plight.

"Oh," said the brakeman in trainmen's dialect, "I guess she doesn't understand much about railway lingo. Our conductor was giving a few orders as follows, which the young woman overheard: 'Jump on her when she comes by, run her down beyond the elevator, cut her in two and bring her head up to the depot.'"

A colored boy employed as office boy in the office of S. P. Moncrief at Atlanta came to work one morning with a face that looked as if it had been run through a meat grinder.

"Henry," demanded Mr. Moncrief, "what in the world happened to you?"

"Well, suh, boss," explained Henry, "I got into a lile argument las' night wif another cull'd genlm'n, and one thing led to another twell I up and hit at him. Well, suh, it seemed lak dat irritated him. He took and blacked both of mah eyes, and bit both of mah years mighty nigh off, and split mah lip and den he throwed me down and stomped me in de stomach. Honest, boss, I never did get so sick of a cull'd genlm'n in mah life!"

I have just received a little note from W. E. Lamneck, who, with Mrs. Lamneck, is at Miami Beach,

Florida, where he has been enjoying the balmy breezes as well as the palmy scenery for some little time. He says he misses his weekly jaunt through the columns of AMERICAN ARTISAN.

Mr. and Mrs. Lamneck will visit Lakeland, St. Petersburg, Tampa and Clearwater, Florida, before returning to the northland and Ohio, their home.

Everyone knows of the quick ready wit of Hugh S. Doherty of Detroit. Quite recently Hugh was brought into court for an alleged speeding offense. Now, Hugh is a most law-abiding citizen, and in his indignation asked for a jury trial. After a most severe cross-examination, the counsel for the prosecution paused, and then, putting on a look of severity, exclaimed: "Mr. Doherty, has not an effort been made to induce you to tell a different story?"

"A different story from the one I told you, sir?"

"That is what I mean."

"Yes, sir; several persons have tried to get me to tell a different story from what I have told, but they couldn't."

"Now, sir, upon your oath, I wish to know who these persons are."

"Well," said Hugh, "I guess you've tried 'bout as hard as any of them."

Here's one on R. S. Tommy Thompson, which is a hangover from the days in camp. It leaked out recently.

Even if our plans do sometimes go awry there comes to us a certain degree of satisfaction if we did our best to make them go aright.

Private Tommy Thompson peered along his rifle and carefully balanced the bull's-eye on the tip of his foresight (as per instructions) and squeezed the trigger.

Bang!

Above the target a red flag was waved to denote a miss.

Again he fired and again the red flag wagged.

"I say, Thompson, where are your shots going?" demanded the sergeant angrily. "Every one so far has missed the target."

Private Tommy Thompson glanced over his shoulder at the irate sergeant.

"I don't know, sergeant," he replied in a mystified voice, "they left here all right!"

Most of us miss a great deal of happiness by putting off till an indefinite date the enjoyment and practice of gladness and good cheer. The time to be happy is now. The time to say heartening things is now. Be kind today. Develop the stuff that is in you, dig up the ore of good intentions and mint it into deeds.

It is easy to smile when everyone else is smiling. Indeed, there isn't much credit due to the man who is cheerful in cheerful circumstances. The really worth-while smile is the smile which persists in the face of gloom and discouragement. The following verses describe this kind of smile:

Smile in Spite of the Scowls of Others

It isn't the fellow who has a smile
Because of the smile of others,
But the fellow who counts is the fellow who smiles
In spite of his scowling brothers;
Or whether they smile or whether they don't,
If he's true to his own soul's fight,
He will keep on smiling through thick and thin;
He will smile for the sake of the right.

The old song says if you smile for them

They will have a smile for you;
But the man who smiles if they smile or not
Is the man who will put things through.
The man who smiles because it's his heart
That brings to his face the glow
Of the peace and the power of doing his part
Is the great world's daily show.

If you know of any humorous happenings in the trade, I would like you to send them in for publication on this page. Humorous anecdotes are always acceptable. Send them along.

The Editor's Page

The Value of Public Liability Insurance

THE state laws governing the employer's liability for injury to employes have strange ways of working. Rather than insuring justice to all parties, these laws seem to take particular delight in fondling the employe, making him even more irresponsible for his own acts that he is apt to be when called upon to pay the penalty for his own negligence or ignorance.

A sheet metal contractor who has a good fundamental training at the outset; who has profited by the experience he has acquired while at work; who is prudent, conscientious and resourceful; who puts his whole heart into his business with the aim first to be of service and then to reap the rewards of such service, may think he has every right to anticipate success.

But in this day and age even greater demands are made. Not only must he follow out carefully and judiciously all the rules of good business practice, he has an accurate system of reckoning his overhead, his depreciation, his inventories, his labor items, his idle labor costs, his interest on capital invested, his fire insurance, and what not. But still he is not immune from the disastrous tricks of frivolous fate—a set of laws seemingly designed to work havoc with him at every turn are bound to spring on him.

One of the greatest necessities the employer of labor has is the adequate protection afforded only by a good public liability insurance company. In Michigan last week facts were presented showing how employers of labor had been compelled by the courts, through no negligence of their own, in fact, in spite of every precaution they had taken, to pay ruinous sums in damages because an unthinking employe had disobeyed a shop rule or had acted contrary to the better judgment of his employer.

There are in existence today few individual businesses, partnerships or even well established corporations that can stand the drain coincident with an adverse damage suit, without seriously impairing their business activities; and yet those things are bound to occur. No fund can be created for such a purpose for the simple reason that any such fund would require too great a diversion of moneys from the ordinary channels of business. How could a private individual or a partnership create a fund of \$25,000 or \$30,000 to be used only in an emergency? It would be impractical. And yet every employer faces the possibility of being called upon to pay such ruinous damages. What is he to do? How can he protect himself? He seemingly cannot rely upon the impartial justice of the courts. Therefore, it seems that his only recourse lies in the adequate protection of a good employers' public liability insurance policy.

You, as employer, may carry out the local ordinance to the letter. You may comply with the state statutes

governing your liability as an employer in every respect. And still when some person comes to grief because of the carelessness or disobedience of one of your employes, you, in nine cases out of ten, will be called upon to settle the damages. The force of mere sentiment is often so strong as to discolor the spectacles of the most impartial judge and jury. Then your only savior is the public liability insurance policy with which you were farsighted enough to provide yourself.

Extending Courtesy to the Salesmen Who Call

HOW much of a salesman's time do you waste? Do you as a purchaser of materials realize that every time you keep a manufacturer's salesman waiting you are adding to the cost of your own materials? Perhaps you don't, but it is true nevertheless. Stop and cogitate for a moment.

Salesmen as a general rule are good fellows. They have a knowledge of the industry as a whole which enables them to give you some valuable pointers. You owe it to yourself and to your business, to give these men the short time they ask.

If you are not interested in the line any particular salesman carries, give him a chance to say his say and be on his way. You may learn some very valuable pointers from him. At any rate he deserves the courtesy of five or ten minutes of your time at least.

Here's why. You, as a purchasing agent wish to buy to the best advantage—both in quality of materials and in price. Buymanship is, therefore, seen to be equally as important as salesmanship. But how are you going to be able to judge which material is the better or whose prices are most nearly right if you are not acquainted with them all?

You say that you have bought materials from the same house for years and years. Fine! But why should this fact prevent you from extending the courtesy of a hearing to other manufacturers' salesmen?

Salesmanship is a give and take proposition. Every salesman has something to give and he gives it freely. The least you can do in appreciation of his efforts to help you is to give him a hearing or at least tell him frankly that you are not interested and waste as little of his time as possible by not keeping him waiting around needlessly and for naught.

There is still another angle. Every minute of the time spent on the road by a salesman costs the manufacturer money. The manufacturer must in turn charge more for his goods if his salesmen are forced to spend more than a certain allotted time at any one place. Look at the subject from a purely economic standpoint. You will readily see the line of reasoning followed by the writer.

President Langenberg Corrects Misleading Impression of Purposes of Research

Research Only Conducted to Determine Certain Laws Governing Different Types of Furnaces

THE following open letter to the entire warm air furnace industry is made by President E. B. Langenberg of the National Warm Air Heating and Ventilating Association in the interests of a better understanding of the purposes of the research work being carried on at the University of Illinois:

An Open Letter to the Furnace Industry.

The attention of the entire furnace trade is called to the following subject with the idea of clarifying a line of discussion which is now current and which may work a serious injury to the parties under discussion.

The following discussion between a salesman and a dealer has been brought to my attention from several sources and speaks for itself:

Let's say that the dealer's name is "Brown" and the salesman's name, "Jones." After the usual preliminaries of introduction, weather, business, prospects, etc., Jones gets serious and in the course of his conversation says to Brown, "Now, confidentially, our furnace has been thoroughly tested at the University of Illinois, and the test shows that it is far superior to any of the furnaces tested." Jones, being plausible in most of his statements and apparently very well posted on furnaces, especially his competitors', appeals to Brown as a man whom he can rely on. Brown swallows the bait and without asking for specific details or verification of the statement, closes the deal and takes on a new line. For a number of years he has been working with a line, building up a following, establishing his credit and acquiring a reputation in the community.

On the unsupported statement of

this particular salesman he jeopardizes his business, his prospects, and his standing in the community and the salesman walks away with the order, smiling.

A careful investigation of the reports issued by the Experiment Station of the University of Illinois or the minutes of the meeting of the National Warm Air Heating and Ventilating Association would show him that the plan and policy



E. B. Langenberg

of the research work up to the present time has been:

1.—To determine certain fundamental laws covering warm air heating.

2.—To determine the performance of five distinct types of furnaces as regards efficiency and capacity and that the reports to date are only, as far as comparison goes, a very rough comparison and have not as yet been completed.

The particular furnace that was selected for the experiments was drawn by lot to represent that particular type under test. The name of the manufacturer was removed

from all printed matter and information pertaining to the make of the furnace has been withheld in all cases except to the Advisory Committee.

In view of the above, no salesman has any authority to make definite statements or draw conclusions to his own advantage for sales purposes. Such statements should be discredited as simply the desire to secure business regardless of the ethics involved. Later tests may possibly discredit everything that he has said, in which case if you happen to be as Brown was above you are just plain "Status Quo."

This matter is being brought to your attention in the interest of every member of the manufacturers' group who is contributing to this wonderful research program and whose interests in this matter must be safeguarded at every point.

The reports of the research work can be secured by writing to Mr. Allen W. Williams, 52 West Gay street, Columbus, Ohio, and the conclusions are carefully and accurately expressed in each chapter and cover the test under question and leave no doubt in any one's mind as to the meaning of what has been done.

J. H. Nichols Expects to Purchase Sheet Metal Business

TO AMERICAN ARTISAN:

Please send us several copies of AMERICAN ARTISAN. We expect to buy a business very soon and as AMERICAN ARTISAN is sure a "getter" for buyer and seller we want to use it in helping us find a suitable location.

Yours truly,

J. H. NICHOLS.

4239 Erskine Ave.,
—, Nebraska.

Homer Furnace Company Stages Big Display in Leiter Stores Building, Chicago

Big Advertising Campaign to Stimulate Sales of Warm Air Furnaces

By GEORGE J DUERR

HUMANITY is in a constant state of evolution. Conditions change, which in turn of necessity bring about some changes in methods of conducting business. The warm air furnace manufacturer or the installer who changes his business methods so as to keep pace with the new developments and demands is the one who writes up the largest number of sales during the year.

The Homer Furnace Company, of Coldwater, Michigan, is among those furnace manufacturers who have kept pace with the changing world.

Sensing the possibilities for sales in a furnace display staged in a department store, the company has placed such a display on the fourth floor of the Leiter Building, Chicago. Here are to be seen about thirty warm air furnaces, set up in all manner of forms, to insure an easy and comprehensive demonstration to patrons.

An illustration of the display, which is said to be the largest of its kind in the world, accompanies this article.

The display itself was set up by members of the Homer Furnace

Company, including Ros B. Strong, General Manager; W. C. Cortright, G. E. Kilbourn, Plant Superintendent; and Charles Hyatt. If you doubt their ability as display makers, go and view the layout yourself. It will certainly convince you that these men know their business.

As the Homer Furnace Company knows how to manufacture furnaces and to instruct dealers to install, so Charles P. Kulp also knows how to market them. Mr. Kulp, with the able assistance of Mrs. Young and Mr. Gould, has charge of the marketing of the Homer furnaces at



Homer Furnace Display at Leiter Stores Building, Chicago

the Leiter Building. Mrs. Kulp, too, is in constant attendance at the store, so that any prospective customers who remain unconvinced of the superior merits of a warm air heating system over its competitors after Mr. Kulp gets through with them are turned over to her gentle

the Vice President of the Homer Furnace Company, revealed a few, at least, of the reasons for the success of the Homer Furnace Company. First and foremost there is the extreme optimism generated by the dynamic personalities of the company heads and diffused

It places a knocker instead of a booster in every town."

Mr. Strong was bubbling over with enthusiasm about the new venture—the display at the Leiter Stores Building—and firmly believes it will increase their sales materially during the coming year.

The coupon shown herewith is one method used to stimulate sales

To Leiter Bldg. Stores Employees

This **COUPON** Is Good For
\$5.00

For the name of each prospective buyer to whom we sell a Heating Plant (either Steam, Hot Water or Hot Air Furnace) we will give you FIVE DOLLARS.

THIS OFFER GOOD ANY TIME UNTIL
AUGUST 15TH 1926

Turn in Names to Heating Dept.,
Fourth Floor—South.

Prospect's Name _____

Address _____

Phone No. _____

Best time to call _____

Turned in by _____

Dept. _____

BRING THIS COUPON TO THE HEATING DEPT.—FOURTH FLOOR SOUTH.
MORE COUPONS IF YOU NEED THEM

Coupon Used to Get Orders

in the heating system. These cards are distributed to employes throughout the store. From them will accrue many additional sales.

An invitation to visit the plant of the Homer Furnace Company at Coldwater is extended to all

Tom S. Reynolds to Operate Firm of Reynolds & Hudson, Portland, Oregon.

The company operating under the name of Reynolds & Hudson, sheet metal contractors at 1080 East Forty-second street, Portland, Oregon, has been dissolved. Tom S. Reynolds has announced that he will conduct the business under his own name at the same address henceforward. We wish Mr. Reynolds every success in his effort to be of service to his community.



Another View of Homer Furnace Display

but persuasive methods. She's the girl behind the man behind the gun, so to speak.

With regard to the disposition of the furnaces, the Leiter Stores will sell these furnaces direct to the user. They will also distribute in Chicago to such dealers who are not large enough to maintain a stock but who use a few furnaces every season.

The engineering work will be done by Mr. Kulp and his assistants, and the furnaces will be installed according to the Standard Code.

The Homer Furnace Company connection in Chicago is just the same as any dealer proposition and is not a direct installation proposition handled from Coldwater. Mr. Kulp's arrangement with the Homer Furnace Company is just the same practically as John Jones of Peoria, Illinois, or Jim Smith of Baraboo, Wisconsin.

An interview with Bruce Strong,

thence throughout the entire organization. The personnel of the company is moulded into one large, happy family, working for a common purpose: "We have no private offices in our organization," said Mr. Strong. "When a furnace dealer comes to our plant—and we encourage them to do so at all times—we want him to feel entirely at home. Our organization to a man (and woman) is there to serve him and we want him to use our service."

Mr. Strong is an active proponent of the doctrine that there is no substitute for personal contact. He believes and has every reason to know that the direct method of furnace installation is not fundamentally sound and cannot, therefore, succeed as well as the method now in use by the majority of furnace manufacturers. "The direct installation methods tend to antagonize the local installer," said he, "which is, of course, detrimental to the business.

W. C. Eickelberg Is Having Difficulty Heating This House

Makes Some Changes, But System Still Refuses to Work Satisfactorily

WILLIAM C. EICKELBERG, Waterloo, Iowa, has run up against a problem on which he would like some enlightenment. The trouble lies in the fact that the living room does not heat properly, the remainder of the house being O. K. Mr. Eickelberg made some changes, but these do not meet with the owner's approval.

The furnace is a 24-inch, made of cast iron. The original layout had three 10-inch and three 9-inch warm air ducts. It also had one 16-inch and one 14-inch cold air return. The cold air ducts both straddled the joist.

Mr. Eickelberg says he changed the cold air duct from an outside wall in the living room to an inside wall. This change is shown on the diagram. The 16-inch duct

shown at "X" was moved to the position marked "R". The size increased from a 16-inch to a 20-inch pipe. The register was increased to 24x30, wood. This gave him a direct drop from the register to an 8-inch box below the joist. Part of the pipe is under the register. The pipe marked "C" on the sketch was taken out entirely.

Another change that was made was to drop the cold air in the dining room below the joist. Here the cold air pipe was increased in size from 14-inch to 18-inch. This register was also made larger. The two cold air returns were connected to the furnace by means of shoes instead of with collars.

Another change was to increase one warm air duct in the living room to a 12-inch pipe. This pipe, how-

ever, has three els. (This pipe should have been larger, but he had to move a post to get it in.)

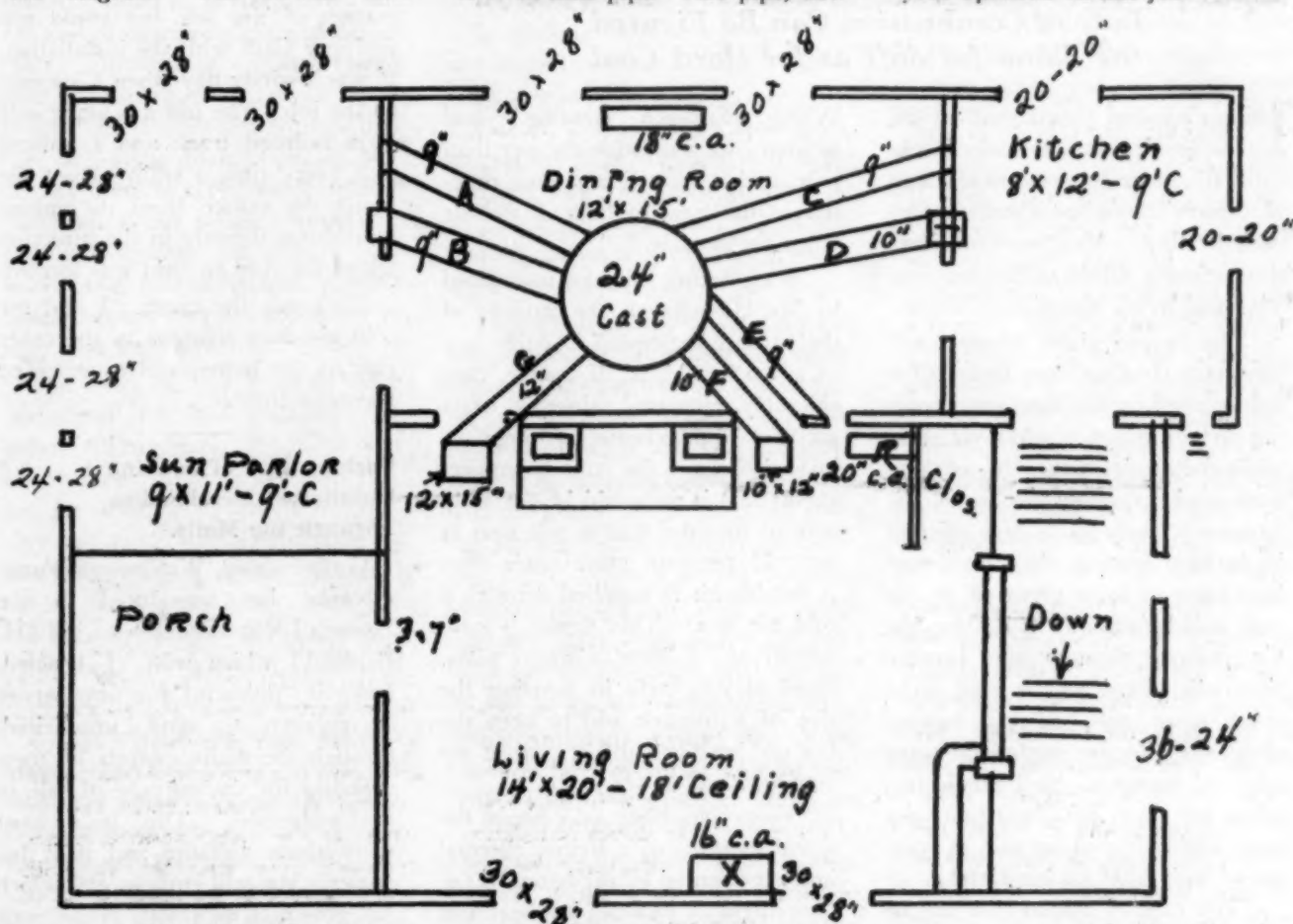
The difficulty was to arrest the drafts in the living room. Under the balcony the cold air would come through the spindle rail down to the floor. Blankets were placed over the rail to convey the air down the stairway. But in spite of these efforts, the temperature could not be raised above 60 degrees.

After the one warm air duct in the living room was enlarged from a 10-inch to a 12-inch pipe, the temperature of the living room was increased 4 degrees in 20 minutes.

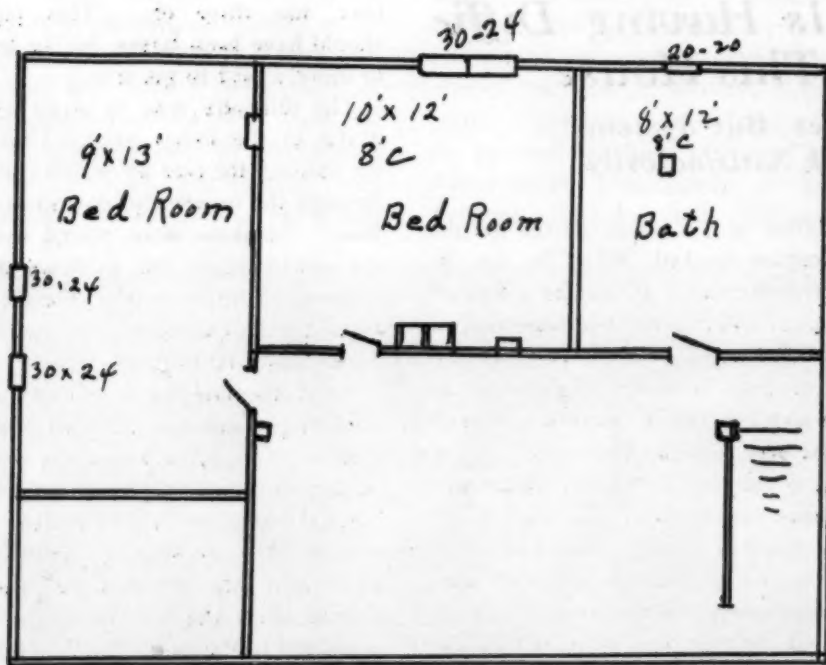
Now, Mr. Eickelberg wants to know why the changes he made should affect the heat in the bathroom and in the sun parlor? Would the furnace work better after the changes were made than before? If not, why not?

The ceiling in the living room, according to Mr. Eickelberg, is 18 feet high.

Mr. Eickelberg would like to have your opinions on this job.



Illustrating Eickelberg's Difficulties



View of Second Story

George W. Hasselbrink's Question Answered With Regard to Hard and Soft Coal

Rate of Combustion Can Be Figured the Same for Soft as for Hard Coal

IN our issue of February 27, 1926, George W. Hasselbrink, Rockford, Ill., made some inquiries about Mr. Snow's book on warm air furnace heating. Mr. Snow answers the questions asked as follows:

"TO AMERICAN ARTISAN:

"The figures given in my book, 'Furnace Heating' may be used for soft as well as for hard coal, bearing certain things in mind, viz., that while the heating power of soft and hard coal are about the same, the former is likely to be less efficient in furnace heating, that is, fewer heat units of those given off by the coal will be utilized in heating the air passing through the furnace than when hard coal is used, since much more soot collects, cutting down the effective surface in some types of furnaces. So I should say, allow not over 7000 heat units per pound of soft coal burned, as compared with 8000 for hard coal.

"The rate of combustion can be figured the same as for hard coal.

When 'Furnace Heating' was written coal was much cheaper than now, and it was the common practice in the East to take all the air from the outside.

"With return air, as mentioned by Mr. Hasselbrink, the capacity of the furnace expressed in cubic feet of space heated, is, of course, considerably increased, since it heats air from approximately 70 degrees, instead of from the outside temperature; that is, it would be perfectly safe to consider that it will heat at least 25 per cent more space than if outside air is supplied through a cold air box. This figure is conservative. I have always advocated playing safe in figuring the size of a furnace and to keep the fire pot heaping full of coal in severe weather.

"Your subscriber asks about the actual meaning of a British thermal unit represented by the letters B.t.u. One might as well call it a heat unit which, defined with sufficient accu-

acy for use in ordinary heating calculations, is simply the amount of heat required to raise one pound of water one degree F."

Smoke From Railroad Engine Gets Into Cold Air Duct of Furnace

On page 31 of our March 20th issue, 'Anxious' asked what caused a furnace to fill the house with smoke when the joints are all securely cemented.

H. J. Fuller, Abington, Pennsylvania, sales representative of the Detroit Vapor Stove Company, offers one explanation which he says is no joke. He writes as follows:

TO AMERICAN ARTISAN:

In your issue of March 20th 'Anxious' asks 'What causes furnace to fill house with smoke?'

During my connection with a well-known furnace manufacturer I had just such a complaint.

I was called upon to solve the problem; I made a thorough examination of the job, but could not find any fault with the installation. It was a windy day when I inspected the job. The job was along side of a railroad track and I noticed that every time a train passed the house the smoke from the engine was blown directly in the direction where the cold air duct was located.

That was the cause. I had the cold air duct changed to the other side of the house, and experienced no more trouble.

Curbing Evil of Sending Unsolicited Merchandise Through the Mails.

Congressman Watson of Pennsylvania, has introduced in the House of Representatives a bill (H. R. 3991) which will, if enacted, make it 'unlawful for any person or concern to send, unsolicited, through the mails, parcels of merchandise for the purpose of sale to the addressee.' This is a most meritorious measure and if it becomes a law will curb an evil which has grown to enormous proportions and is causing congestion in the

postal service. Besides, it is a nuisance which should be abated.

While perhaps the hardware trade does not suffer directly, yet every individual dealer must indirectly feel its effects. One man received, recently, a demand for payment for

merchandise which was not ordered and never received. The letter is in the hands of the Federal authorities.

The full influence of dealers' organizations will be brought to bear to secure the enactment of this bill.

Every dealer who reads this

should write his senators and congressman to give active support to this bill. Remember the number and purpose of this bill—H. R. 3991—"Prohibiting the sending of unsolicited merchandise through the mails."

H. H. Daughters Tells Ohio Hardware Men How to Use Displays

Says More Money Can Be Made if Windows Are Properly Decorated

(Continued from March 13)

So, I went on through the store criticizing many displays when we finally approached a display of flashlights, which was much more attractive than the display you see before you. It lent itself splendidly for some good tangible criticism and I waded right into it, saying "That display of flashlights is typical of the display that is wrong. In the first place, it is a popular priced item displayed in an exclusive manner and of course suggests exclusive price. Further, there is an irresistible impulse in every human being to touch or feel the merchandise that they are going to buy and in this display there is a resistance against handling since people would be afraid of spoiling the display, and as a result, people pass on without buying, unless they are absolutely in need of a flash light.

The head of this store at once challenged this last statement by saying, "Daughters, I believe you are distorted and let me tell you, you are dead wrong, for in this display we have sold over twice as many flash lights as we ever sold before and I don't believe that you can take these nicer items and display them in a plain, inartistic fashion."

I accepted the challenge and displayed the flash lights myself the same way you see them displayed in the simple way on the table before you, leaving the other artistic display intact and in two weeks' time, by actual count, my simple display

sold exactly ten times more flash lights than the other.

It is needless to say that this store, which is termed the largest retail hardware store in the U. S., is now displaying all of their merchandise in the plain, simple manner as shown on the table before you. This method of display works identically the same in the small towns as it does in the big cities. It is a principle you cannot get away from and at the same time get the business.

In making your displays, there are several important factors that I want you to remember.

First: Use a flat top table such as you see here, as a flat top table will sell twice as much goods as a so called pyramid table, which we find in use in a great many hardware stores today.

This pyramid table has four or five shelves, one towering above the other. The customer can stand only on one side of a pyramid, and that in itself makes it only half efficient, since they come in contact with but half the goods, and another big reason against it, no matter how hard you try to make a decent display, the merchandise will look all jumbled up. Now, look at this flat top table before you. All merchandise on the entire table is in plain view and accessible to the personal touch, no resistance against buying any item on that table.

Another thing, display your merchandise as nearly as possible according to selling merits, meaning by that, if alarm clocks sell twice as

fast in dollars and cents as flashlights, give them twice the space. The reason for that is obvious, if alarm clocks are selling twice as fast as flashlights, it shows that they are in greater demand and have a greater sales possibility, and, of course, should be shown to the best advantage over the flashlights, and space does that very thing. For instance, to better illustrate this point, it would be folly to take a lot of ice picks and give them a large space across the table this time of year just because you had a large stock of them, when you can hardly give an ice pick away, and then a very small space right beside it, display perhaps weather stripping which is in great demand, and should be pushed to the limit. If the weather stripping sells five times as fast as ice picks, it should have five times the space on the tables.

Display as nearly as possible everything according to the way it sells.

I have told you that pyramid tables are inefficient compared to flat top tables and while we are on the subject of displays and equipment, please allow me to tell you in passing what I think of show cases or any glass case. You, as hardware men, could easily afford and would make a handsome profit on the deal, to pay your local drayman a hundred dollars per case to have them hauled to the dump. A strong statement you say, but let me repeat it, you could easily afford and would make a handsome profit on the deal,

to pay your local drayman a hundred dollars per case to have them hauled to the dump. Glass is a sales resistance, or a non-conductor of sales. It keeps the people away from merchandise, and remember what we said a while ago, about there being an irresistible impulse in every human being to want to feel or handle the merchandise they see, and handling the merchandise is the one thing that gets the sale.

You say, "How about pilfering, our losses would be tremendous without show cases to protect our goods." That would probably be true in the average hardware store, where there are various high racks, pyramids and other obstructions which store does lend itself splendidly to the art of pilfering, but not so in a store where it is all flat like the plan I recommend, and there are no obstructions to the view, between the sales people and the customer. It is all right to keep one or two show cases to properly protect items like pocket knives, razors and merchandise of that nature, but it is only such items that need this protection.

Now, we said some time ago that there were three fundamentals in merchandising and we have fairly well covered two of them.

First, was proper store arrangement, and second, proper merchandise displays, and we told how one was related to the other and now we have come to the third, and last, and I wonder who could guess what it is? Well, I'll tell you—its price tickets. If there ever was gross neglect in running any part of a store, it is certainly in the line of price tickets. Price tickets in all hardware stores are conspicuous by their absence.

The lack of price tickets is the open link in the chain of successful merchandising. 99% of the places where I find stores well laid out, and with attractive displays, I find the price tag missing throughout the entire store. Now, by price tag I do not mean that little insignificant price ticket or string tag that the merchant uses for the cost and selling price. They are absolutely all

right, and should be used as they are now—for, information of the merchant and his clerks, but those tags are for that purpose only, and their function ends right there. They will never sell merchandise as a customer has to pick up the article and search for this little ticket in order to find the price which is contrary to psychology of humans. The merchandise attracts the customer's eye—but it is the "price card" that creates the interest in the article and it is the price card that generally causes the customer to pick up and examine the article.

Merchandise does not create a desire to possess it, in itself. It is the price tag. Haven't you often found yourself standing in front of some show window looking at nearly every item? And most of the time you spent reading the price cards; while you passed on down the street you merely glanced at the merchandise in the windows which were unpriced.

You know that it is true, that when you pick up a mail order catalogue, you turn nearly every page singly, studying the prices, but let the mail order house cut out pricing their catalogues, and you would find that you would turn two or three pages and throw the book down. Your store is exactly the same as a catalogue, except that you have the advantage, since the customer is able to examine the merchandise, and see what he is buying. The people pass through your store and are interested in looking around only when they find all of the articles with a price and showing the selling price in large, plain figures. Your display is a silent salesman—but your price ticket is the VOICE of that display. Would you have a mute salesman in your store? A display without a price ticket is like a salesman without a voice. People are always timid about inquiring the price and 99% of the time they won't do it, and since it is the price that completes the sale, all merchants who are not pricing their displays with a good sized card, are losing business proportionately. I have actually seen

the sale of items increase several hundred per cent after it was properly price-carded.

It costs so little to put price cards on your merchandise that it is nothing short of criminal not to do it. But if it costs you several hundred dollars, it would pay for itself the first year, in increased sales,—hence increased profits.

Consult your stationery jobber, and for only a dollar or so you can get speed ball pens and ink and you can get sign cards in large sheets, and cut to size yourself, or buy the various sizes already cut. The size of the price card depends largely upon the size of the display.

The main thing is to get the selling price on the display in large plain figures, discernible at several feet distance, and the sooner that is done the sooner you will learn the tremendous value of price cards, and your only regret will be that you didn't do it the day you started in business.

Every one of these three fundamentals are essential to the success of your store. They have been the working base in the success of the chain store, and I believe that I can say that authoritatively, since I spent ten years with one of the largest and most successful ones, and I say to you that in applying these principles to your store, it will require some thought and effort but it "can be done" where there is a will there is a way. We know the hardware men's job is not an easy one, but I'm a bit afraid too many hardware men feel that all they have to do is to buy the merchandise and it will sell itself without effort, and I want to read you a poem which exemplifies the truth,—That nothing comes without digging.

F. D. Mitchell Resigns As Secretary American Hardware Manufacturers

F. D. Mitchell, Secretary-Treasurer of the American Hardware Manufacturers' Association, has resigned his position with that organization, it became known this week. The resignation was tendered in January and accepted at a

Clean and Sound

WHEN you order a shipment of elbows, you want them to arrive cleanly galvanized and perfectly shaped.

That's the way Lupton Elbows come to you—protected from knocks and dirt by specially constructed cartons.

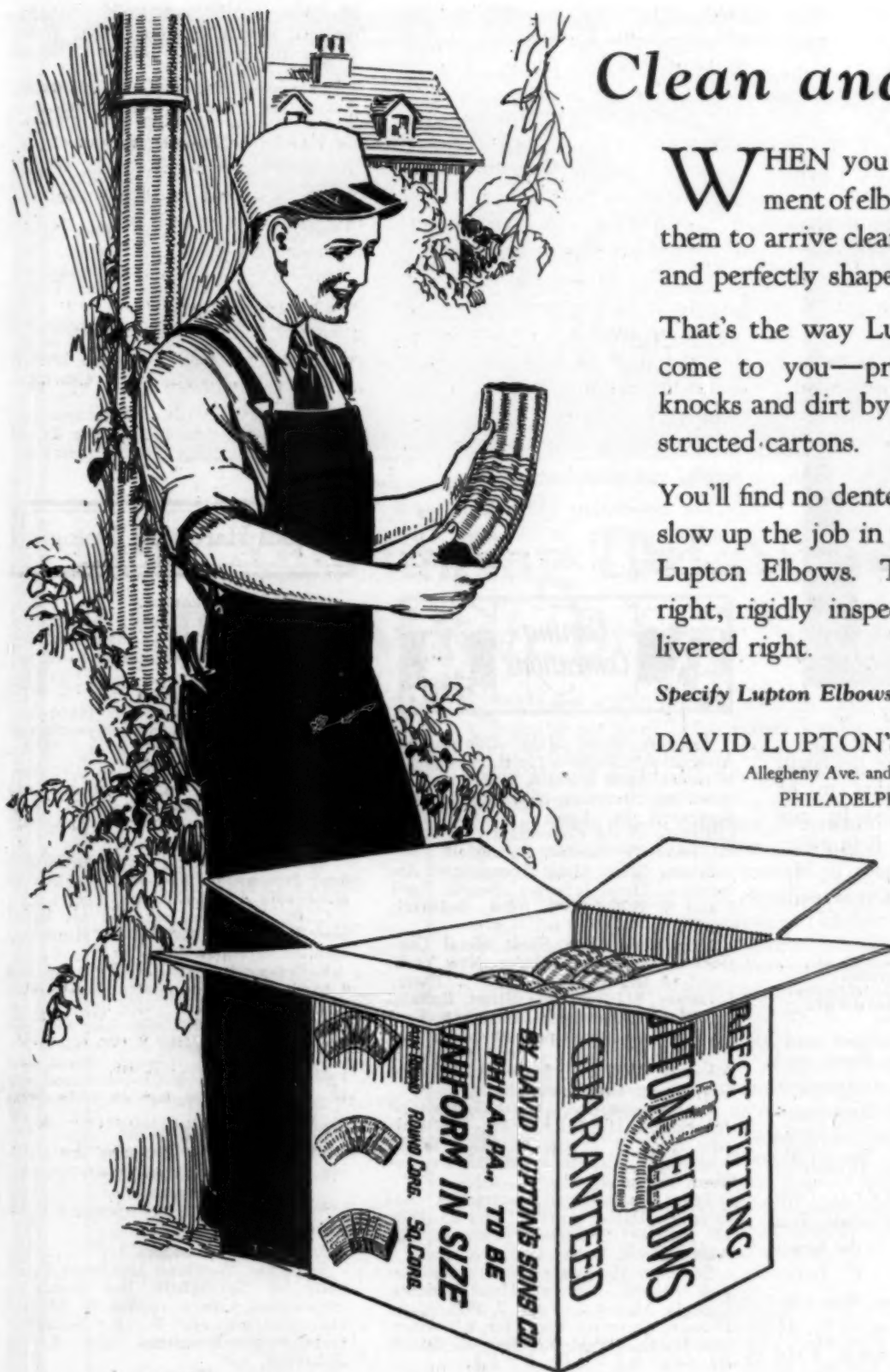
You'll find no dented "misfits" to slow up the job in your order of Lupton Elbows. They're made right, rigidly inspected, and delivered right.

Specify Lupton Elbows to Your Jobber

DAVID LUPTON'S SONS CO.

Allegheny Ave. and Tulip St.

PHILADELPHIA



LUPTON

ELBOWS THAT FIT

Say you saw it in AMERICAN ARTISAN—Thank you!

board meeting held in New York, January 27. Mr. Mitchell's resignation was made necessary by the press of other business. It will become effective as soon as his successor is appointed.

In recognition of Mr. Mitchell's



F. D. Mitchell

quarter century of service the board voted him a compensation to be continued until rescinded by any board that shall succeed it in office. The name of the successor to Mr. Mitchell will be divulged at an early date.

James T. Fernley Becomes Counselor for Heavy Hardware Association.

The American Iron, Steel and Heavy Hardware Association, which for many years has maintained secretarial headquarters in the Marbridge building, Broadway and Thirty-fourth street, New York, has moved to Philadelphia, having placed its affairs in the hands of the organization of T. James Fernley. 505 Arch street, that city, following the resignation of A. H. Chamberlain as secretary. Mr. Fernley and his son, George A. Fernley, will act as counselors for the association.

T. James Fernley is secretary of the National Hardware Association, the shelf hardware jobbers' organization, and also handles the business affairs of a number of other national trade associations. He has

appointed Benjamin R. Sackett secretary of the American Iron, Steel and Heavy Hardware Association and offices have been taken at 503 Arch street, Philadelphia. Mr. Sackett was formerly assistant district engineer in Philadelphia for the S. K. F. Industries, Inc.

Other officers of the American Iron, Steel and Heavy Hardware Association are G. M. Congdon, Congdon & Carpenter, Providence, Rhode Island, president; G. K. Conont, Sligg Iron Store Company, St. Louis, Missouri, first vice-president, and E. McK. Froment, Froment & Company, New York City, second vice-president.

The association will hold its next annual meeting at Atlantic City, New Jersey, on May 25, 26 and 27.



Missouri Sheet Metal Contractors' Association, Columbia Hotel, Springfield, Missouri, April 5 and 6, 1926. B. Kolbenschlag, Secretary, 3618 North Grand Boulevard, St. Louis; H. R. Naber, Chairman of the Convention Committee, 311 Boonville Avenue, Springfield.

Illinois Sheet Metal Contractors' Association, Hotel Jefferson, Peoria, April 7 and 8, 1926. R. J. Jobst, Secretary, Peoria.

New York State Sheet Metal Contractors Association, Elmira, New York, April 14 and 15, 1926. John J. Yager, Secretary, 817 Sycamore Street, Buffalo.

National Warm Air Heating & Ventilating Association, Annual Convention, St. Louis, Missouri, April 14 and 15. Allen W. Williams, Secretary, 52 West Gay Street, Columbus, Ohio.

Pennsylvania Sheet Metal Contractors' Association, Hotel Lycoming, Williamsport, April 14, 15 and 16, 1926. W. F. Angermeyer, Secretary, 7253-55 Frankstown Avenue, Pittsburgh.

Texas Sheet Metal Contractors' Association, Dallas, April 22 and 23, 1926. H. Stanyer, Secretary-Treasurer, 2422 Alamo Street, Dallas.

Southern Hardware Jobbers Association, Atlanta-Biltmore Hotel, Atlanta, Georgia, May 4, 5, 6 and 7, 1925. John Donnan, Secretary-Treasurer, 821 American National Bank Building, Richmond, Virginia.

Old Guard Southern Hardware Salesmen's Association, Atlanta-Biltmore Hotel, Atlanta, Georgia, May 5. R. P. Boyd, R. F. D. No. 4, Knoxville, Tennessee, Secretary.

American Hardware Manufacturers' Association, Atlanta Biltmore Hotel, Atlanta, Georgia, May 4, 5, 6 and 7, 1926. Frederick D. Mitchell, Secretary-Treasurer, 1819 Broadway, New York City.

Southeastern Retail Hardware and Implement Association, (composed of Alabama, Florida, Georgia and Tennessee)

Convention and Exhibition, Atlanta, Georgia, May 10, 11 and 12, 1926. Walter Harlan, Secretary, 701 Grand Theatre Building, Atlanta.

Panhandle Hardware and Implement Association, Amarillo Hotel, Amarillo, May 10, 11, and 12, 1926. C. L. Thompson, Secretary-Treasurer, Canyon.

Arkansas Retail Hardware Association, Little Rock, Arkansas, May, 1926. L. P. Biggs, Secretary, 815 Southern Trust Building, Little Rock.

National Association of Sheet Metal Contractors, Louisville, Kentucky, May 24 to 28, 1926. Edwin L. Seabrook, Secretary, 608 East Chestnut Street, Philadelphia, Pennsylvania.

Carolinas Hardware Association, Raleigh, North Carolina, June 8 to 10, 1926. A. R. Craig, Secretary, 717-18 Commercial Bank Building, Charlotte, North Carolina.

Mississippi Retail Hardware and Implement Association, Biloxi, June 21, 22 and 23, 1926. Guy Nason, Secretary Starkville.

Retail Hardware Doings

Arkansas.

Waldron Hardware Mercantile Company at Waldron has sold its business to E. M. Fuller and W. E. Judy.

Illinois.

The D. E. Holishead Hardware store at Thompson has been purchased by Garritt Bolhus.

Iowa.

W. E. Feltus has purchased the Henderson Hardware Store at Henderson.

Kansas.

The new Bunting Hardware Company has opened for business at 510 Minnesota Avenue, Kansas City.

C. E. Morrison has sold his hardware business at LaCrosse to Humburg Lumber Company.

Ballenger and Walters have opened a hardware and implement business at Longton.

Gail Wilson of Luray has sold his hardware business to E. Wurst.

W. C. Alford, George Renn and Everett Mitchell have purchased the F. D. Stonbraker hardware business at Wellington.

Michigan.

Salin Hardware Company are opening a branch store at Ironwood.

Minnesota.

Warner Johnson has opened a hardware store at Foreston.

Missouri.

Schaeffer Maschino Hardware Company of Springfield has been incorporated with a capital of \$25,000. Incorporators are F. R. Schaeffer, George S. Maschino, and A. D. Schaeffer.

Montana.

T. A. Veblen has sold his hardware business at Roundup to M. H. Wallace.

The M. E. Brown Hardware Store of Clyde Park has been damaged by fire. The loss is estimated at \$5,000.

North Dakota.

Burt Hardware & Machinery Company has been incorporated with a capital of \$10,000. Incorporators are: A. J. Nathan, August Walsh and Martin Sonnenburg.



The mark of superior quality on Galvanized Steel Sheets

Announcing INLAND "TEC" Master Brand Sheets

Copper Alloy Steel for Exposed Uses

For all exposed uses or wherever an extremely durable galvanized sheet is required we recommend and urge the use of Inland Copper Alloy Steel as a base for Master Brand Sheets.

Tests and usage prove that Copper Alloy Steels last much longer than regular open hearth steels.

"TEC" Master Brand galvanized sheets made with a Copper Alloy base will give the utmost in service.



Contributing Member

SHEET STEEL
TRADE EXTENSION COMMITTEE

SIMULTANEOUSLY with the announcement by the Sheet Steel Trade Extension Committee of the "TEC" (Trade Extension Committee) Master Brand, these sheets are made available by the Inland Steel Company.

The Inland Steel Company, as one of the cooperators in the movement for higher quality and broader markets, is licensed to use this mark.

The Master Brand mark signifies that the sheets bearing it have been manufactured under the exacting specification of the Trade Extension Committee and are subject to constant inspection and test. This specification is the result of years of careful thought and study by leaders in the industry.

The Inland Steel Company, long noted for the quality and uniformity of its sheets, whole-heartedly subscribes to the Committee's specification and adds the Master Brand mark as a further indication of its desire to contribute to the raising of quality standards in the industry. Inland Master Brand sheets carry a double assurance of uniform quality and can be immediately identified as they will also carry the Inland brand. Upon request we will supply complete information about Master Brand sheets.



INLAND STEEL COMPANY

General Offices: First National Bank Building, Chicago

Works: Indiana Harbor, Ind., Milwaukee, Wis., Chicago Heights, Ill.

Branch Offices and Representatives

St. Paul Seattle St. Louis San Francisco Salt Lake City
Milwaukee Kansas City New Orleans Los Angeles

I

When writing mention AMERICAN ARTISAN—Thank you!

Steel Market for First Quarter of 1926 Exceeds in Production and Demand Similar Period for 1925

Pig Iron Sales and Inquiries Are Light—Demand Continues Light in Non-Ferrous Metals

WITH the first quarter of the year drawing to a close, comparisons of steel production, shipments and apparent volume of consumption against the corresponding months of 1925 all are in favor of the present period.

The fact that the first three months of 1925 showed the greatest production for any opening quarter on record lays further emphasis upon the fundamental vigor of the present situation.

One year ago at this date, demand began to show the first signs of faltering and production to taper off after 60 to 90 days of high-speed activity.

At present, no indications that a similar turn of affairs is developing or is in early prospect, can be detected.

On the contrary, some elements of demand appear still to be expanding, and production, though near its maximum limit, still is edging slightly higher.

Chicago finds specifications exceed shipments by a wide margin and mill deliveries are more deferred there than at any time this quarter.

Under heavy pressure, Chicago production again has been lifted a point higher to 95 per cent.

Pittsburgh and Youngstown are kept at 80 to 90 per cent.

Copper.

Copper sold up to 14.25 cents delivered Connecticut and 14.37½ cents Midwest a few days ago.

Not much went that high, but some producers assumed a firmer attitude after doing a fair amount of business up to 14.17½ cents or 14.20 cents.

However, the firmness did not last long and after a little easiness

and quietness some producers were willing to sell at 14.12½ cents.

Zinc.

The price of prime western zinc went up quickly about a week ago to 7.50 cents East St. Louis, mostly on activity by dealers.

Users bought lightly and at the same time one or two smelters entered the market as buyers, while none of the smelters has offered freely.

Output has been curtailed but still is large, while the London market remains too low for export of anything except high grade.

A fairly strong ore market is a factor in sustaining slab prices.

Tin.

Supplies of tin are in a tight position, not only for metal on hand here, but in the Orient also. Meanwhile consumption continues big, though perhaps not so great in other lines as in tin plate.

Spot has sold in small lots mostly above 65.00 cents for about two weeks, but lots large enough to make a real market have not been available for earlier than late March delivery and these have been fairly steady at 65.00 cents for several days.

Lead.

This metal has been decidedly stronger the past few days, with a premium developing in the East for early positions over the contract price of the leading interest. Buyers evidently held out to the last moment and then had to come on the run.

Pig Iron.

The pig iron market continues dull, despite the approach of the second quarter.

Many melters have enough iron on hand or coming to them for

April and will defer buying until the middle of that month.

Others must close soon, having taken out all their first quarter tonnage one to three weeks ago.

A few small buyers are protected for second quarter at \$20.50, base.

No interest in basic is developing and \$20 is the unchanged price.

A few filling in tonnages of malleable were sold at \$20.50, valley.

The technical position of producers in holding the market at \$23, Chicago furnace, for Number 2 foundry and malleable, is not strong in some respects, but that of melters also presents weak spots. The melt is heavy and gives no indications of a decided decline, and the carry-over will be light.

Resale iron, chiefly of odd analysis, seems to have disappeared and \$23 apparently is being quoted on all business.

At Birmingham pig iron sales are fairly good and stocks at furnaces have been reduced considerably.

Quotations are firm at \$22, base, furnace.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.00; old iron axles, \$25.50 to \$26.00; steel springs, \$18.50 to \$19.00; No. 1 wrought iron, \$13.00 to \$13.50; No. 1 cast, \$15.50 to \$16.00, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 5 cents, and cast aluminum, 19 cents.

Solder.

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$41.00; commercial 45-55, \$38.50, and plumbers', \$36.00, all per 100 pounds.

PERFORATED METALS



All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATING METAL

THE HARRINGTON & KING PERFORATING CO.

5649. FILLMORE ST.—CHICAGO, ILL. U. S. A.
NEW YORK OFFICE: 114 LIBERTY ST.

VENTILATORS

We carry a full line of the below named well known ventilators:

EARLE	IWAN'S	"ROYAL"
PERFECTION	STANDARD	GLOBE
HERCULES	"STAR"	UNO
AMERICAN-LARSON	"BEST"	

We can make prompt shipments on your orders for anything in the sheet metal line.

Try us—write for catalog today

BERGER BROS. CO.

229 to 237 ARCH STREET

WAREROOMS AND FACTORY: 100 TO 114 BREAD STREET
PHILADELPHIA, PA.

IWAN'S' VOLCANO REVOLVING CHIMNEY TOP

THE design of the deflector brings the wind diagonally upward over the chimney opening through opening in lower part of hood. This construction creates a good draft on any chimney.



Simple iron mountings. Sold without hood so you can make your own tops. Strong inexpensive and easy swinging.

Write today for catalogs and price list.

IWAN BROTHERS

SOUTH BEND, IND.

Manufacturers of Hardware Specialties

Hood Patterns
FREE
with
order
for
iron
mountings



TERNE PLATE HEADQUARTERS



A brand as old as the Terne Plate Industry in this country—the best that can be made by the oldest and most experienced makers of Terne Plate. Its durability, superior quality and complete satisfaction are proven by its large sales to a host of satisfied users.

FREE—two wall hangers of tables of weights of black and galvanized sheets sent on request.

THE J. M. & L. A. OSBORN CO.

"Everything used in Sheet Metal Work"

CLEVELAND

BUFFALO WAREHOUSE: 64-66 RAPIN STREET

CONDUCTOR HOOKS



EFFICIENT and reliable for plain or corrugated pipe. Ask for sample and No. 27 Catalogue listing hooks and hangers illustrated.

L. D. BERGER CO.

59 N. 2nd St.
PHILADELPHIA, PA.



WE make both kinds of galvanized shingles — hand dipped being stamped from prime tin plate and immersed one at a time in molten zinc and the other kind which are stamped from sheets already galvanized.

We also make painted shingles—either red or green.

CORTRIGHT METAL ROOFING CO.
50 N. 23rd Street, Philadelphia
528 S. Clark Street, Chicago

CORTRIGHT METAL SHINGLES

Hopson Metal Ceilings and Sides

Tasty, dignified designs, characterize Hopson Metal Ceilings and Sides. They're all easy to match and install. Our pictorial catalogue will show what we have to offer in original designs. Get a copy today.

W. C. HOPSON CO.

216 Ellsworth Ave. Grand Rapids, Mich.



Mention AMERICAN ARTISAN in your reply—Thank you!

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Foundry	\$22 00
Southern Fdy., No. 2 27 01	\$22 01
Lake Superior Charcoal....	\$24 00
Malleable	\$25 00

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets....	\$27 00
IX 20x28.....	\$1 25
IXX 20x28 56 sheets....	\$17 05
IXXX 20x28.....	\$18 40
IXXXX 20x28.....	\$20 00

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 10
IX 20x28, 40-lb. "	\$25 00
IX 20x28, 30-lb. "	\$21 20
IX 20x28, 20-lb. "	\$24 20
IX 20x28, 15-lb. "	\$23 20
IX 20x28, 10-lb. "	\$23 20
IV 20x28, 20-lb. "	\$20 05
IC 20x28, 15-lb. "	\$18 55
IC 20x28, 12-lb. "	\$15 25
IC 20x28, 8-lb. "	\$13 55

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.	4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28.	\$13 75
Cokes, 90 lbs., base, 20x28.	\$12 95
Cokes, 100 lbs., base, 20x28.	\$12 25
Cokes, 107 lbs., base, 1c	
20x28	\$13 40
Cokes, 155 lbs., base, 1X	\$15 40
20x28	
Cokes, 155 lbs., base, 56	\$8 50
sheets	
Cokes, 175 lbs., base, 56	\$9 70
sheets	
Cokes, 195 lbs., base, 56	\$10 05
sheets	

BLUE ANNEALED SHEETS

Base 10 ga.....per 100 lbs.	\$3 80
"Armco" 10 ga.....per 100 lbs.	4 00

ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3 80
No. 22-24.....per 100 lbs.	3 55
No. 26.....per 100 lbs.	3 90
No. 27.....per 100 lbs.	3 95
No. 28.....per 100 lbs.	4 10
No. 29.....per 100 lbs.	4 10

GALVANIZED

"Armco" 28.....per 100 lbs.	\$6 70
No. 18.....per 100 lbs.	4 50
No. 18-20.....per 100 lbs.	4 05
No. 22-24.....per 100 lbs.	4 20
No. 26.....per 100 lbs.	4 95
No. 27.....per 100 lbs.	5 10
No. 28.....per 100 lbs.	5 25
No. 30.....per 100 lbs.	6 75

BAR SOLDER

Warranted	
50-50.....per 100 lbs.	41 00
Commercial	
45-55.....per 100 lbs.	35 50
Plumbers.....per 100 lbs.	36 00

ZINC

In Slabs	8 50
----------------	------

SHEET ZINC

Cask Lots (600 lbs.).....	13 75
Sheet Lots	14 75

BRASS

Sheets, Chicago base.....	19 40
Mill base	19 40
Tubing, brass base.....	27 00
Wire, base	19 40
Rods, base	17 40

COPPER

Sheets, Chicago base.....	22 40
Mill base	22 40
Tubing, seamless base.....	25 40
Wire No. 9 & 10, B. & S. Ga.	20 40
Wire No. 11, B. & S. Ga.	20 40

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

LEAD

American Pig	\$9 00
Bar	10 00

Sheet

Full Coils.....per 100 lbs.	14 00
Cut Coils.....per 100 lbs.	14 25

TIN

Pig Tin.....per 100 lbs.	73 50
Bar Tin.....per 100 lbs.	74 50

ASBESTOS

Paper up to 1/16.....6c per lb.	
Roll board.....6 1/4c per lb.	
Mill board 3/32 to 1/4.....6c per lb.	
Corrugated Paper (750	
sp. ft. to roll).....\$6.00 per roll	

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$2 50

Fine Cleaning

Steel Only, each	1 25
------------------------	------

BURRS

Coppers Burrs only	45c
--------------------------	-----

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 50-lb. cans, net	30
American Seal, 25-lb. cans, net	2 00
Asbestos, 5-lb. cans, net.....	45
Pecora.....per 100 lbs.	7 51

CHIMNEY TOPS

Iwan's Complete Rev. &	
Vent	30c
Iwan's Iron Mountain only.....	35c
Standard	30 to 40c

CLINKER TONGS

Front Rank, each.....	\$ 75
Per doz.	8 40

CLIPS

Damper	
Acme, with tail pieces,	
per doz.	\$1 25
Non Rivet tail pieces,	
per doz.	35

COPPERS—Soldering

Painted Hoofing	
1 lb. and heavier.....per lb.	40c
2 1/4 lb.	per lb. 45c
3 lb.	per lb. 45c
1 1/4 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRAKES

Chicago Steel Bending	
No. 1 to 6B.....Net	

COUPLING HOSE

Brass	per doz. \$3 20
-------------	-----------------

CUT-OFFS

Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
standard gauge	40c
28 gauge	30c

DAMPERS

"Yankee" Hot Air	
7 inch, each 30c, doz.....	\$1 75
8 inch, each 35c, doz.....	2 40
9 inch, each 30c, doz.....	2 75
10 inch, each 32c, doz.....	3 00

Smoke Pipe

7 inch, each.....	\$ 35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

Reversible Check

8 inch, each.....	\$1 50
9 inch, each.....	1 70

DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle.....per doz.	\$14 00
7-ft. Handle.....per doz.	26 00
Iwan's Hercules pattern,	
per doz.	14 90

EAVES TROUGH

Galv. Crimpedge, crated...75 & 85	
-----------------------------------	--

ELBOWS

Conductor Pipe Milcor.	
Galv., plain or corrugated,	
round flat Crimp.	
Std. Gauge	65c
28 Gauge	55c
26 Gauge	40c
24 Gauge	10c

Square Corrugated

Standard Gauge	60c
No. 28 Gauge	45c
26 Gauge	30c

Fortice Elbows

Standard Gauge Conductor Pipe	
plain or corrugated.	
Not nested	70 & 85
Nested solid	70 & 85

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 gauge.	
5-inch	1 15
6-inch	1 25
7-inch	1 75

Special Corrugated

6-inch	\$1 00
7-inch	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue.	
5-inch	\$1 65
6-inch	1 75
7-inch	2 40

WOOD FACES—50% off list.

FENCE

736-6-12% (100 rods).....	\$29 02
1048-6-14% (100 rods).....	44 02

FILES AND RASPS

Heller's (American)	50-10%
American	50-10%
Arcade	50%
Black Diamond	40-10-5%
Eagle	50%
Great Western	50%
Kearney & Foot.....	50%
McClellan	50%
Nicholson	50%
Simonds	40%

FIRE POTS

Ashton Mfg. Co.	
Complete line	
Fire pots and Torches....	42c

Wetco Burnz Co.

No. 1 Furn. Gasolene with	
large shield, 1 gal.....	\$ 75
No. 2 Furn. Kerosene, 1	
gal.	12 13
No. 10 Brazier, Kerosene	
or Gasolene, 10 gals....	47 52
No. 5 Torch, Gasolene or	
Kerosene, 1 qt.....	7 92
No. 21 Torch, Gasolene, 1	
quart	5 40
No. 22 Torch, Gasolene, 1	
pint	4 05

Clayton & Lambert's

East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Ne-	
braska, Kansas, Oklahoma, Ar-	
izona, San Angelo and Laredo,	
Texas	52c
West of above boundary line	
.....	42c

Geo. W. Diener Mfg. Co.

No. 92 Gasolene Torch, 1	
qt.	\$ 5 50
No. 9350, Kerosene or	
Gasolene Torch, 1 qt....	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.....	13 00
No. 15 Tinner's Furn.	
Round tank, 1 gal.....	13 00
No. 21 Gas Soldering Fur-	
nace	1 00
No. 110 Automatic Gas	
Soldering Furnace.....	10 50

Double Blast Mfg. Co.

Gasolene, Nos. 25 and 26....	40c
------------------------------	-----

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	20c
(Extra Disc. for large	
quantities)	

Chas. A. Homes, Inc.

Busser No. 1.....	\$ 9 00
Busser No. 2.....	12 00
Busser No. 25.....	12 00
Busser No. 42.....	15 00
Busser No. 48.....	19 00

GALVANIZED WARE

Falls (Galv. after made),	
10-qt.	\$2 20
10-qt.	\$2 20

GLASS

Single Strength, A, 25-in.	
bracket	55c
Single Strength, A, 34 to 40-	
in, bracket	82c
Single Strength A, all other	
brackets	81c
Double Strength A, all sizes..	82c
Tubs (Galv. after made),	
No. 1.....	\$8 25
No. 2.....	7 20

HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	45c
Eaves Trough	
Milcor Eclipse Wire.....	15c
Milcor Triplex Wire.....	10c
Milcor Milwaukee Extension	
forming) List plus.....	12 1/2c
Milcor Selflock H. T. Wire,	
List plus	50c

HOOBS

Box	
V. & B. No. 1, each.....	\$0 20

Conductor

Milcor	
"Direct Drive" Wrought	
Iron for wood or brick....	15c

Hay

V. & B. No. 1, each.....	\$0 20
--------------------------	--------

HUMIDIFIERS

"Front-Range" Automatic	
In single lots	50c
In lots of 10 or more.....	50-55c
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50c

LIFTERS

Stove Cover	
Coppered	per gro. \$4 00
Alaska	per gro. 4 75

MALLETS

Hickory	per doz. \$3 20
---------------	-----------------

MITRES

Galvanized steel mitres, and	
caps, and pieces, outlets....	30c
Milcor	
Galv. one piece stamped....	40c

NAILS

Cut Steel	\$4 25
Cut Iron	4 25
Wire	
Common	\$ 15
Cement Coated	7 25



"A handy tool—much superior to our former methods"

National Enameling & Stamping Co., Milwaukee

Straight lines, curved lines, angles, complicated notches—all are easy to the Unishear.

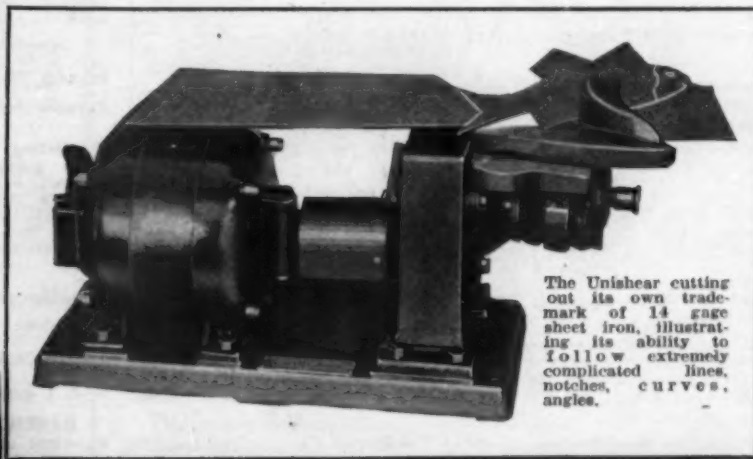
Portable and compact, Unishear cuts any flat stock quicker, better, cheaper—without burr, without distortion of material. Follows any

line exactly, stops accurately at any point.

Needs but one operator even on largest work, straight or irregular.

Operates from lamp socket or power circuit (G.E. motor, any voltage or cycle available). Capacity 14 U.S. Gage sheet iron. Speed, 15 ft. per minute.

Users are finding this a handy machine. Ask us to demonstrate it on your work.



The Unishear cutting out its own trademark of 14 gage sheet iron, illustrating its ability to follow extremely complicated lines, notches, curves, angles.

The Unishear Company, Inc., 170 Fifth Ave., New York, N. Y.

When writing mention AMERICAN ARTISAN—Thank you!

ADVERTISERS' INDEX

The dash (—) indicates that the advertisement does not appear in this issue.

A		M	
Aeolus Dickinson Co.	—	Marsh Lumber Co.	—
Allred Mfg. Co.	—	Marshalltown Heater Co.	—
American Foundry & Furnace Co.	—	Marshalltown Mfg. Co.	—
American Furnace Co.	5	May-Fiebeger Co.	—
American Rolling Mill Co.	—	Merchant & Evans Co.	—
American Steel & Wire Co.	47	Meyer Furnace Co., The.	4
American Tube & Stamping Co.	12	Meyer Bros. Co., F., The.	—
American Wood Register Co.	—	Milwaukee Corr. Co., Front Cover	—
Arex Co.	—	Monitor Furnace Co.	—
		Mt. Vernon Furn. & Mfg. Co.	—
		Mueller Furnace Co., L. J.	—
B		N	
Barnes Zinc Products Co.	—	National Enameling & Stamp	—
Berger Bros. Co.	41	ing Co., Granite City Steel	—
Berger Co., L. D.	41	Works	—
Bernz Co., Otto	45	New Jersey Zinc Sales Co., The	—
Bertsch & Co.	45	Northwestern Stove Repair Co.	13
Braden Mfg. Co.	—		
Brillion Furnace Co.	10		
Brown, Wm. R.	—		
Burgess Soldering Furnace Co.	45		
C		O	
Chicago Elbow Machine Co.	45	Oakland Fdy. Co.	—
Chicago Furnace Supply Co.	10	Osborn Co., The J. M. & L. A.	41
Chicago Solder Co.	—		
Clark-Smith Hardware Co.	47		
Clayton & Lambert Mfg. Co.	—		
Cleveland Castings Pattern Co.	12		
Cleveland Cooperative Stove Co.	13		
Coes Wrench Co.	—		
Col-Burn Heater Co.	—		
Connors Paint Co., Wm.	12		
Copper & Brass Research Association	—		
Cortright Metal Roofing Co.	41		
Cox Co., Abram	2		
D		P	
Davis and Co., Inc., C. S.	—	Parker-Kalon Corp.	—
Dieckmann Co., Ferdinand.	—	Peck, H. E.	50
Diener Mfg., Geo. W.	—	Peck, Stow & Wilcox Co.	—
Double Blast Mfg. Co.	—	Pecora Paint Co.	—
Double-Duty Elbow Co.	45	Peninsular Stove Co.	—
Dreis & Krump Mfg. Co.	47	Premier Warm Air Heater Co.	—
E		Q	
Eaglesfield Ventilator Co.	—	Quick Meal Stove Co.	—
Excelsior Steel Furn. Co.	11	Quincy Pattern Co.	12
F		R	
Fanner Mfg. Co.	—	Reps Heater Co.	13
Floral City Heater Co.	10	Richardson & Boynton Co.	—
Forest City Fdy. & Mfg. Co.	—	Robinson Furnace Co.	—
Fox Furnace Co.	—	Rock Island Register Co.	—
Friedley-Voshardt Co.	—	Royal Ventilator Company.	—
G		Rudy Furnace Co.	—
Gerock Bros. Mfg. Co.	—	Rybolt Heater Co.	—
Gray & Dudley Co.	8	Ryerson & Son, Inc., Jos. T.	—
Great Lakes Supply Co.	45		
H		S	
Hardware Specialty Co.	—	Sall Mountain Co.	13
Harrington & King Perf. Co.	41	Schill Brothers Co.	—
Hart & Cooley Co.	—	Schwab & Sons, R. J.	—
Heating Systems & Supply Co.	—	Security Stove & Mfg. Co.	6
Henry Furnace & Fdy. Co.	4	Sheet Steel Trade Ex. Comm.	—
Hero Furnace Co.	—	S. L. Products Co.	—
Hess-Snyder Co.	9	Special Chemicals Co.	—
Hessler Co., H. E.	47	Standard Fdy. & Mfg. Co.	—
Homer Furnace Co.	—	Standard Furn. & Supply Co.	9
Hopson Co., W. C.	41	Standard Ventilator Co.	47
Hussey Co., C. G.	45	Stearns Register Co.	15
I		St. Clair Foundry Corp.	7
Inland Steel Co.	39	St. Louis Heating Co.	—
Independent Register Co.	—	St. Louis Tech. Inst.	50
International Heater Co.	—	Sturtevant Co.	—
Iwan Bros. Co.	41	Success Heater Mfg. Co.	—
K		T	
Kirk-Latty Mfg. Co.	12	Taylor Co., N. & G.	—
Kruse Co.	—	Thatcher Co.	7
L		Thermo Gas Furnace Co.	—
Lalanc & Grojean Mfg. Co.	—	Tuttle & Bailey Mfg. Co.	—
Lamneck & Co., W. E.	16		
Langenberg Mfg. Co.	—		
Lennox Furnace Co.	2		
Liberty Foundry Co.	8		
Lupton's Sons Co., David.	37		

Markets—Continued from page 42

NETTING, POULTRY		ROOFING	
Galvanized before weav-	—	Best grade, slate surf. prep'd	\$3 20
ing	45-10%	Best talc surfaced	3 65
Galvanized after weaving	45%	Medium talc surfaced	3 00
		Light talc surfaced	1 20
		Red Rosin Sheeting, per ton	57 00
PASTE		SCREWS	
Asbestos Dry Paste:		Sheet Metal	
200-lb. barrel	\$15 00	No. 7, 1/4"x1/2", per gross	\$9 53
100-lb. barrel	8 00	No. 10, 1/2"x1/2", per gross	65
35-lb. pail	3 25	No. 14, 1/2"x1/2", per gross	53
10-lb. bag	1 00		
5-lb. bag	55		
3 1/2-lb. cartons	30		
PIPE		SHEARS, TINNERS & MACHINISTS'	
Conductor		Viking	\$23 00
Cor. Rd., Plain Rd or Sq.		Lennox Throatless	
"Interlock" Galvanized		No. 18	35%
Crated and nested (all	75-2 1/4%	Shear blades	10%
gauges) and not nested		(f. o. b. Marshalltown, Iowa.)	
(all gauges)	70-15%		
"Milcor" "Titelock" Uniform			
Blue Stove		Peerless Steel Squaring	
25 gauge, 5 inch U. C.		Foot Power	
nested	11 00	No. 1-30", 18 ga. cap.	15%
25 gauge, 6 inch U. C.		No. 2-36", 18 ga. cap.	15%
nested	12 00	No. 4-52", 18 ga. cap.	15%
25 gauge, 7 inch U. C.		No. 10-120", 22 ga. cap.	15%
nested	14 00	No. 4A-52", 16 ga. cap.	15%
30 gauge, 5 inch U. C.		Cast Iron Foot Power	
nested	10 00	No. 01-30", 18 ga. cap.	15%
30 gauge, 6 inch U. C.		Power Driven	
nested	10 50	No. 100 Series, 2 Shaft Drive.)	
30 gauge, 7 inch U. C.		No. 143-42", 18 ga. cap.	15%
nested	13 00	(No. 300 Series, 3 Shaft Under-	
T-Joint Made up		neath Drive.)	
6-inch, 25 ga.	per 100 32 50	No. 243-42", 14 ga. cap.	15%
		(No. 300 Series, 3 Shaft Under-	
Furnace Pipe		neath Drive.)	
Double Wall Pipe and		No. 342-42", 10 ga. cap.	15%
Pipe Fittings	50%	No. 272-72", 10 ga. cap.	15%
Single Wall Pipe, Round		(No. 500 Series, 3 Shaft Under-	
Iron Pipe Galvanized	50%	neath Drive.)	
Galvanized and Black		No. 595-36", 10 ga. cap.	15%
Fittings	50%	(No. 600 Series, 3 Shaft Under-	
Milcor Galvanized		neath Drive.)	
Pipe and Fittings	50%	No. 6120-120", 3/16" cap.	15%
Lead		SHOES	
Per 100 lbs.	\$12 50	Milcor	
		Galv. Std. Gauge, Plain or	
		corg. round flat crimp	45%
		26 gauge round flat crimp	45%
		34 gauge round flat crimp	10%
		Conductor	65%
POKERS, STOVE		SNIPS, TINNERS'	
Wrt Steel, str't or bent,		Clover Leaf	40 & 10%
per doz.	\$0 75	National	40 & 10%
Nickel Plated, coil handles,		Star	50%
per doz.	1 10	Milcor	Net
POKERS, FURNACE		SQUARES	
Each	\$0 50	Steel and Iron	Net
		(Add for bluing, \$3 per doz. net.)	
PULLEYS		Mitre	Net
Furnace Tackle	per doz. \$0 60	Try	Net
per gross	6 00	Try and Bevel	Net
Furnace Screw (encased)		Try and Mitre	Net
per doz.	75	Fox's	per doz. \$0 00
Ventilating Register		Winterbottom's	10%
Per gross	9 00		
Small, per pair	30		
Large, per pair	50		
PUTTY		STOPPERS, FLUE	
Commercial Putty, 100-lb.		Common	per doz. \$1 10
kits	\$3 40	Gem, No. 1	per doz. 1 10
		Gem, flat, No. 3	per doz. 1 00
QUADRANTS		VENTILATORS	
Malleable Iron Damper	10%	Standard	30 to 40%
REDUCERS—Oval Stove Pipe		WIRE	
Per doz.		Plain annealed wire, No. 3	
7-8, 1 doz. in carton	\$2 00	per 100 lbs.	\$3 00
BASEBOARD REGISTERS		Galvanized barb wire, per	
Excelsior	50%	100 lbs.	\$0 90
FLOOR REGISTERS AND BORDERS		Wire cloth—Black painted,	
Cast Iron	20%	12-mesh, per 100 sq. ft.	3 10
Steel and Semi-Steel	40%	Cattle Wire—galvanized	
Baseboard	40%	catch weight spool, per	
Adjustable Ceiling		100 lbs.	3 55
Ventilators	40%	Galvanized Hog Wire, 80 rod	
		spool, per spool	3 54
Register Faces—Cast and Steel		Galvanized plain wire, No. 3,	
Japanned, Bronzed and		per 100 lbs.	3 50
Plated, 4x5 to 14x14	40%	Stove Pipe, per stone	1 10
Large Register Faces—Cast,			
14x14 to 36x42	60%		
Large Register Faces—Steel,			
14x14 to 36x42	65%		
RIDGE ROLL		WRINGERS	
Milcor		No. 730, Guarantee	per doz. \$55 00
Galv., Plain Ridge Roll,		No. 770, Bicycle	per doz. 52 50
b'd'd	75-10-5%	No. 670, Domestic	per doz. 48 50
Galv., Plain Ridge Roll,		No. 110, Brighton	per doz. 48 50
crated	75-10%	No. 750, Guarantee	per doz. 55 50
Globe Finales for Ridge Roll	50%	No. 740, Bicycle	per doz. 52 50
		No. 22, Pioneer	per doz. 29 00
		No. 2, Superb	per doz. 29 00

Say you saw it in AMERICAN ARTISAN—Thank you!

MAKE YOUR OWN ELBOWS

Any Size in Two Minutes with this Machine.

JUST take your straight pipe—fasten the form or jig to it and in two minutes you have four 3 or 4 piece adjustable elbow all ready for use and any size you want.

PURNELL ELBOW EDGING and CUTTING MACHINE

It is simple, sound and constructed of the very best materials—both installers and manufacturers are using it. No more large stock for the installer. Enables you to make adjustable elbows any size for each job at once when you need them.

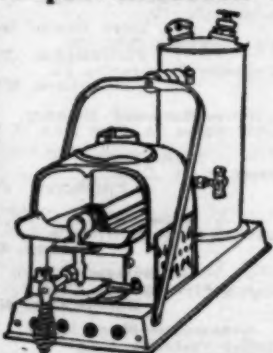
Write today for circular giving complete description and price.

Chicago Elbow Machine Co.
MAIN OFFICE: 826 N. Boulevard,
Oak Park, Ill.



Range of capacity 7 in. to 36 in. Elbows of No. 24 gauge and lighter

Improved Models of Soldering Furnaces



Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority of present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

Look these models over. Each leads its class. Line them up and take your choice.

Do you want a Catalog?

BURGESS SOLDERING FURNACE CO.

Department A COLUMBUS, O.

Improved No. 3 Gem with Pump



PATENTED No. 14 PUMP, No. 13 BULB
WRITE FOR COMPLETE CATALOG.

MADE RIGHT—TO WORK RIGHT

THE "ALWAYS RELIABLE" furnaces and torches really live up to their name. They will stand any amount of use, much abuse, and still give your customers the kind of service that they have a right to expect.

Jobbers sell at factory prices.

OTTO BERNZ CO. INC.
NEWARK, N. J.

Offices in New York City, Chicago, Fort Worth, Denver, Helena, Mont., San Francisco, Los Angeles, Seattle and St. Thomas, Ont.

C. G. HUSSEY & CO.

Rolling Mills and Office, PITTSBURGH, PA.

Manufacturers of

SHEET COPPER, BOTTOMS, ROLL COPPER, TINNED and POLISHED COPPER, NAILS, SPIKES, RIVETS, CONDUCTOR PIPE, EAVES TROUGH, ELBOWS, SHOES, MITRES, CORRUGATED COPPER SHEETS, CRIMPED COPPER SHEETS, COPPER WALL TIES, COPPER LATH, ETC.

Branch Warehouses in New York, Philadelphia, Cincinnati & Chicago
Member, Copper & Brass Research Association

Read the Wants and Sales Pages



Send for catalog today

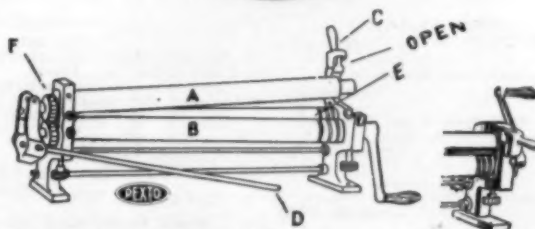
VIKING SHEAR

Compound LEVER Handle—Removable Blades

A child can work them

VIKING SHEAR CO., Erie, Pa.

Mention AMERICAN ARTISAN in your reply—Thank you!



Regular Lightning SLIP ROLL FORMERS

NEW and original Pexto Features are embodied in these Forming Machine Patterns. You'll find the following features important.

In these formers the gripping rolls (A) and (B) have an extreme clearance of 1/2 inch. Grooves cut in rolls are intended to allow work with a wire to be formed. Tight pulley, or Tight and Loose pulleys and iron floor legs can be fitted when so ordered.

All operations are performed at one end of the machine, the convenient end where the crank is fitted. This is a big time and labor saving feature. Rolls (B) and (E) are adjusted with knurled screws and once adjusted they cannot slip. The gears (F) are steel, machine cut, running more smoothly than cast iron gears without danger of slipping or breaking with any thickness of metal.

These are other features—

Write today for Guide No. 35A giving complete descriptions of this and numerous other Pexto Machines and Tools.

GREAT LAKES SUPPLY CO.

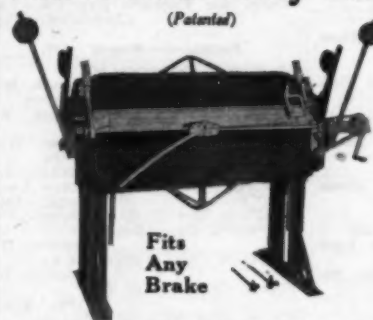
J. H. Sutherland, Mgr. Metal Tools Dept.

9342 Ewing Avenue

South Chicago, Ill.

The Double-Duty BRAKE SHEAR

(Patented)



Fits Any Brake

Always Ready for Use—Rapid—Clean Cutting

Cuts 20 gauge and lighter straight as a Power Shear

Simple—Absolutely Reliable

Folds up out of the way so brake work can be done

Strong—Easy to attach—Will last for years

TRY IT TEN DAYS IN YOUR SHOP BEFORE YOU BUY

DOUBLE-DUTY ELBOW COMPANY

32 B So. La Salle Street

Aurora, Ill.

50-INCH FORMING ROLL

This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and Punches, all sizes, for hand or belt power.

Write for Catalog "R" BERTSCH & CO., Cambridge City, Ind.



BUYERS' DIRECTORY

- Asbestos Paper.**
Ball Mountain Co., Chicago, Ill.
- Asbestos Products.**
Ball Mountain Co., Chicago, Ill.
- Bale Ties.**
American Steel & Wire Co., Chicago, Ill.
- Bells—Stove.**
Kirk-Latty Mfg. Co., Cleveland, Ohio
- Brakes—Bending.**
Dreis & Krump Mfg. Co., Chicago, Ill.
- Brakes—Cornice.**
Dreis & Krump Mfg. Co., Chicago, Ill.
- Brass and Copper.**
Copper & Brass Research Association, New York
Hussey & Co., C. G., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Cans—Garbage.**
Osborn Co., The J. M. & L. A., Cleveland, Ohio
- Castings—Malleable.**
Fanner Mfg. Co., Cleveland, Ohio
- Ceilings—Metal.**
Friedley-Voshardt Co., Chicago, Ill.
Hospen & Co., W. C., Grand Rapids, Mich.
Milwaukee Corrugating Co., Milwaukee, Wis.
Wheeling Corrugating Co., Wheeling, W. Va.
- Chaplets.**
Fanner Mfg. Co., Cleveland, Ohio
- Chain—Snash.**
Parker-Kalon Corp., New York, N. Y.
- Chimney Tops.**
Standard Ventilator Co., Lewisburg, Pa.
- Cleaners—Furnace.**
Sturtevant, Boston, Mass.
- Chimney Tops.**
Iwan Bros., South Bend, Ind.
- Cleaners—Suction.**
Brown, Wm. R., Buffalo, N. Y.
Sturtevant, Boston, Mass.
- Clinker Tongue.**
Federal Mfg. Co., Holland, Mich.
- Copper.**
Copper & Brass Research Association, New York
Hussey & Co., C. G., Pittsburgh, Pa.
- Cornices.**
Friedley-Voshardt Co., Chicago, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Out-Offs—Rain Water.**
Allred Mfg. Co., Indianapolis, Ind.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Diffuser—Air Duct.**
Aeolus-Dickinson Co., Chicago, Ill.
- Doors—Metal.**
David Lupton's Sons Co., Philadelphia, Pa.
- Eaves Trough.**
Barnes Zinc Products Co., Chicago, Ill.
- Berger Bros. Co.,** Philadelphia, Pa.
Berger Co., L. D., Philadelphia, Pa.
Clark-Smith Hardware Co., Peoria, Ill.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Jersey Zinc Sales Co., The, New York, N. Y.
Wheeling Corrugating Co., Wheeling, W. Va.
Elbows and Shoes—Conductor.
American Rolling Mill Co., Middletown, Ohio
Barnes Zinc Products Co., Chicago, Ill.
- Dieckmann Co., Ferdinand,** Cincinnati, Ohio
Double-Duty Elbow Co., Aurora, Ill.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Enamel Wire.**
Lalanc & Grosjean Mfg. Co., Chicago, Ill.
- Wood Faces—Cold Air.**
American Wood Register Co., Plymouth, Ind.
Eaglesfield Ventilator Co., Indianapolis, Ind.
Marsh Lumber Co., Dover, Ohio
Milwaukee Corrugating Co., Milwaukee, Wis.
- Fences.**
American Steel & Wire Co., Chicago, Ill.
- Flue Thimbles.**
Milwaukee Corrugating Co., Milwaukee, Wis.
- Furnace Brushes.**
Hardware Specialty Co., Fort Wayne, Ind.
- Furnace Cement—Asbestos.**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Milwaukee Corrugating Co., Milwaukee, Wis.
Pecora Paint Co., Philadelphia, Pa.
- Furnace Rings.**
Independent Register and Mfg. Co., Cleveland, Ohio
Milwaukee Corrugating Co., Milwaukee, Wis.
Walworth Run Fdy. Co., Cleveland, Ohio
- Furnace Fans.**
Heating Systems & Supply Co., Chicago, Ill.
Warm Air Furnace Fan Co., The, Cleveland, Ohio
- Furnaces—Warm Air.**
American Furnace Co., St. Louis, Mo.
American Foundry & Furnace Co., Bloomington, Ill.
Brillion Iron Works, Brillion, Wis.
Chicago Furnace Supply Co., Chicago, Ill.
Cleveland Cooperative Stove Co., Cleveland, Ohio
Col-Burn Heater Co., Chicago, Ill.
Cox Stove Co., Abram, Peoria, Ill.
Excelsior Steel Furnace Co., Chicago, Ill.
Floral City Heater Co., Monroe, Mich.
Forest City Fdy. & Mfg. Co., Cleveland, Ohio
Fox Furnace Co., Elyria, Ohio
Gray & Dudley Co., Nashville, Tenn.
Heating Systems & Supply Co., Chicago, Ill.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Hero Furnace Co., Sycamore, Ill.
Hess-Snyder Co., Massillon, Ohio
Homer Furnace Co., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Kruse Co., Indianapolis, Ind.
Lamneck Co., W. E., Columbus, Ohio
Langenberg Mfg. Co., St. Louis, Mo.
Lennox Furnace Co., Marshalltown, Ia.; Syracuse, N. Y.
Liberty Foundry Co., St. Louis, Mo.
Marshalltown Heater Co., Marshalltown, Iowa
May-Fieberger Furnace Co., Newark, Ohio
Meyer Furnace Co., The, Peoria, Ill.
Monitor Furnace Co., Cincinnati, Ohio
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
Mueller Furnace Co., S. J., Milwaukee, Wis.
Oakland Foundry Co., Belleville, Ill.
Peninsular Stove Co., Detroit, Mich.
- Richardson & Boynton Co.,** New York, N. Y.
Robinson Furnace Co., Chicago, Ill.
Rudy Furnace Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
Schill Bros. Co., Crestline, Ohio
Schwab & Sons Co., R. J., Milwaukee, Wis.
Security Stove & Mfg. Co., Kansas City, Mo.
Standard Foundry & Mfg. Co., DeKalb, Ill.
Standard Furnace & Supply Co., Omaha, Neb.
St. Clair Foundry Corporation, Belleville, Ill.
St. Louis Heating Co., St. Louis, Mo.
Success Heater Mfg. Co., Des Moines, Iowa
Thatcher Co., Chicago, Ill.
Utica Heater Co., Utica, N. Y.
Waterman-Waterbury Co., Minneapolis, Minn.
Western Steel Products Co., Duluth, Minn.
Wise Furnace Co., Akron, Ohio
Williamson Heater Co., Cincinnati, Ohio
- Garages—Metal.**
Milwaukee Corrugating Co., Milwaukee, Wis.
- Glass—Wire.**
David Lupton's Sons Co., Philadelphia, Pa.
Williams Hardware Co., Streater, Ill.
- Grilles.**
Hart & Cooley Co., New Britain, Conn.
Independent Register & Mfg. Co., Cleveland, Ohio
Tuttle & Bailey Mfg. Co., Chicago, Ill.
- Handles—Boiler.**
Berger Bros. Co., Philadelphia, Pa.
- Hangers—Eaves Trough.**
Berger Co., L. D., Philadelphia, Pa.
Hospen & Co., W. C., Grand Rapids, Mich.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Heaters—Cabinet.**
Fox Furnace Co., Elyria, Ohio
Gray & Dudley Co., Nashville, Tenn.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Peninsular Stove Co., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
- Heaters—School Room.**
Floral City Heater Co., Monroe, Mich.
Hero Furnace Co., Sycamore, Ill.
Meyer Furnace Co., The, Peoria, Ill.
Standard Furnace & Supply Co., Omaha, Neb.
Waterman-Waterbury Co., Minneapolis, Minn.
- Hooks—Conductor.**
Berger Co., L. D., Philadelphia, Pa.
- Humidifiers.**
National Air Moistener Co., Minneapolis, Minn.
- Jobbers—Hardware.**
Clark-Smith Hardware Co., Peoria, Ill.
- Kitchen Utensils.**
Lalanc & Grosjean Mfg. Co., Chicago, Ill.
- Lath—Expanded Metal.**
Milwaukee Corrugating Co., Milwaukee, Wis.
- Machines—Crimping.**
Bertsch & Co., Cambridge City, Ind.
- Machinery—Culvert.**
Bertsch & Co., Cambridge City, Ind.
- Machines—Tin-Smiths'.**
Bertsch & Co., Cambridge City, Ind.
Chicago Elbow Machine Co., Oak Park, Ill.
- Dreis & Krump Mfg. Co.,** Chicago, Ill.
Great Lakes Supply Co., South Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Joseph T., Chicago, Ill.
Unishear Co., The, New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
- Metals—Perforated.**
Harrington & King Perforating Co., Chicago, Ill.
- Miters.**
Friedley-Voshardt Co., Chicago, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Miters—Eaves Trough.**
Braden Mfg. Co., Terra Haute, Ind.
David Lupton's Sons Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Nails—Hardened Masonry.**
Parker-Kalon Co., New York, N. Y.
- Nails—Slating.**
Hussey & Co., C. G., Pittsburgh, Pa.
- Nails—Wire.**
American Steel & Wire Co., Chicago, Ill.
- Oil Burners.**
Security Stove & Mfg. Co., Kansas City, Mo.
- Ornaments—Sheet Metal.**
Friedley-Voshardt Co., Chicago, Ill.
Gerock Bros. Mfg. Co., St. Louis, Mo.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Paint.**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Pecora Paint Co., Philadelphia, Pa.
- Patterns—Furnace & Stove.**
Cleveland Castings Pattern Co., Cleveland, Ohio
Quincy Pattern Co., Quincy, Ill.
Vedder Pattern Works, Troy, N. Y.
- Pipe and Fittings—Furnace.**
Chicago Furnace Supply Co., Chicago, Ill.
Excelsior Steel Furnace Co., Chicago, Ill.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Lamneck Co., W. E., Columbus, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Robinson Furnace Co., Chicago, Ill.
Standard Furnace & Supply Co., Omaha, Neb.
- Pipe and Fittings—Stove.**
Allred Mfg. Co., Indianapolis, Ind.
Excelsior Steel Furnace Co., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Pipe—Conductor.**
Barnes Zinc Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Burton Co., W. J., Detroit, Mich.
Clark-Smith Hdw. Co., Peoria, Ill.
Dieckmann Co., Ferdinand, Cincinnati, Ohio
Friedley-Voshardt Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Jersey Zinc Sales Co., The, New York, N. Y.
Wheeling Corrugating Co., Wheeling, W. Va.

When writing mention AMERICAN ARTISAN—Thank you!

Secretary Wanted

for
State Sheet Metal
Trade Association

MUST be a live wire with pleasing personality. We want a man who is an organizer—one who is willing to work and who is a good, convincing talker.

In replying give full details as to your experience and qualifications. Tell us just why you feel that you can fill the bill.

Your reply will be held in strictest confidence. Address—Sheet Metal Trade Association, c/o American Artisan, 620 S. Michigan Ave., Chicago, Illinois.

Whitney LEVER Punch Line

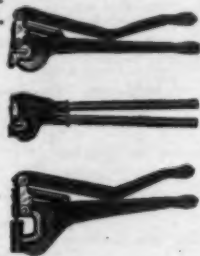
Widest Known and Used. 40,000 in Use. Best by 15 Years' Test. Critical "Uncle Sam" uses hundreds. Made in 5 sizes. Others Planning. Simplest Construction. Fewest Parts. Easiest Operated and Quickest Changed.

Ask Your Jobber or
Write Us

W. A. Whitney
Mfg. Co.

715 Park Ave.

Rockford,
Ill.



WIRE GLASS FOR SKYLIGHTS

Ribbed, figured prism and polished wire. Plain, ribbed, figured prism and heavy floor glass.

Also distributors of Standard Radio Sets & Supplies—
Batteries & Flashlights

WILLIAMS HARDWARE COMPANY

Williams Building, Streator, Illinois

CHICAGO STEEL CORNICE BRAKES

STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES:
Most Durable, Easiest Operated, Low in Price;
Made in All Lengths and to Bend All Gauges
of Metal. Over 23,000 in use.

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 7404 Loomis Street, CHICAGO

WIRE

electrical, rope, barbed, plain, nails (bright and coated), tacks, spikes, bale-ties, hoops, springs, netting, wire fences, steel

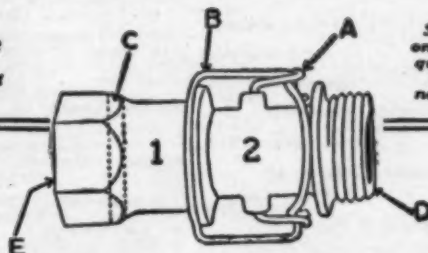
posts, steel gates, trolley wire, rail bonds, flat wire (strip steel), piano wire, round and odd-shaped wire, screw stock, concrete reinforcement. Aerial Tramways.

Illustrated Books describing uses, Free

American Steel & Wire Company

Chicago New York Boston
Denver Birmingham Dallas
U. S. STEEL PRODUCTS CO.:
San Francisco Los Angeles Portland Seattle

The
simplest
hose
coupling
made



Snaps
on or off
quickly
Does
not leak

HESSLER Perfect Hose Connection

YOU and your customers, everybody who uses a hose will welcome the Hessler Hose Connection.

It saves hose length and the hose, no kinking or twisting—no splashing, no leakage and you snap it on or off in a wink.

The Hessler will be a big, fast seller and a real profit maker.

Order a sample lot now—made in four sizes. Write today for price and circulars.

H. E. HESSLER CO.

Syracuse, New York

"THE STANDARD" VENTILATOR and CHIMNEY CAP

DOES away with high stacks, swings freely in the slightest breeze and positively cures down-drafts. The strongest and most efficient combination to be had. Has no equal for chimney purposes. All jobbers sell them—write your jobber or us for prices and catalog today.

Manufactured by

STANDARD VENTILATOR CO.
LEWISBURG, PA.



Plecker's Galvanized Eave Trough and Corrugated Expanding Conductors

Made of
Keystone
Copper Bearing
Steel



Cost no more
Lasts longer
Therefore
Cheapest

CLARK-SMITH HARDWARE CO. - - - PEORIA, ILLINOIS

Buy you saw it in AMERICAN ARTISAN—Thank you!

BUYERS' DIRECTORY

- Posts—Steel Fence.**
American Steel & Wire Co., Chicago, Ill.
- Punches.**
Bertsch & Co., Cambridge City, Ind.
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
- Punches—Combination Bench and Hand.**
Parker-Kalon Corp., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
- Punches—Hand.**
Whitney Metal Tool Co., Rockford, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
- Putty—Stove**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Pecora Paint Co., Philadelphia, Pa.
- Quadrants—Damper**
Parker-Kalon Corp., New York, N. Y.
- Radio—Sets and Supplies.**
Williams Hardware Co., Streator, Ill.
- Ranges—Combination Gas & Coal**
Cox Stove Co., Abram, Philadelphia-Chicago
Quick Meal Stove Co., St. Louis, Mo.
Thatcher Co., Newark, N. J.
- Ranges—Gas.**
Cox Stove Co., Abram, Philadelphia-Chicago
Quick Meal Stove Co., St. Louis, Mo.
Gray & Dudley Co., Nashville, Tenn.
- Register Shields**
Hardware Specialty Co., Fort Wayne, Ind.
- Registers—Warm Air.**
American Wood Register Co., Plymouth, Ind.
Chicago Furnace Supply Co., Chicago, Ill.
Eaglesfield Ventilator Co., Indianapolis, Ind.
Excelsior Steel Furnace Co., Chicago, Ill.
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Independent Register and Mfg. Co., Cleveland, Ohio
Lamneck & Co., W. E., Columbus, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Robinson Furnace Co., Chicago, Ill.
Rock Island Register Co., Rock Island, Ill.
Standard Furnace & Supply Co., Omaha, Neb.
Stearns Register Co., Detroit, Mich.
Tuttle & Bailey Mfg. Co., Chicago, Ill.
United States Register Co., Battle Creek, Mich.
Walworth Run Fdy. Co., Cleveland, Ohio
- Registers—Wood.**
American Wood Register Co., Plymouth, Ind.
Chicago Furnace Supply Co., Chicago, Ill.
Eaglesfield Ventilator Co., Indianapolis, Ind.
- Regulators—Damper.**
Parker-Kalon Corp., New York, N. Y.
- Repairs—Stove and Furnace.**
Hessler Co., H. E., Syracuse, N. Y.
Northwestern Stove Repair Co., Chicago, Ill.
- Ridging.**
American Rolling Mill Co., Middletown, Ohio
David Lupton's Sons Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Rivets—Stove.**
Kirk-Latty Mfg. Co., Cleveland, Ohio
- Roasters.**
Lalanc & Grosjean Mfg. Co., Chicago, Ill.
- Rods—Stove.**
Kirk-Latty Mfg. Co., Cleveland, Ohio
- Rolls—Forming.**
Bertsch & Co., Cambridge City, Ind.
- Roofing Cement**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Pecora Paint Co., Philadelphia, Pa.
- Roof—Flashing.**
Hessler Co., H. E., Syracuse, N. Y.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Roofing—Iron and Steel.**
American Rolling Mill Co., Middletown, Ohio
Cortright Metal Roofing Co., Philadelphia, Pa.
Friedley-Voshardt Co., Chicago, Ill.
Inland Steel Co., Chicago, Ill.
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
National Enameling and Stamping Co., Granite City Steel Works, Granite City, Ill.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Wheeling Corrugating Co., Wheeling, W. Va.
- Roofing—Tin.**
Taylor Co., N. & G., Philadelphia, Pa.
- Roofing—Zinc.**
New Jersey Zinc Sales Co., The, New York, N. Y.
- Rubbish Burners.**
Hart & Cooley Co., New Britain, Conn.
- Salt—Ammoniac.**
Specials Chemicals Co., Highland Park, Ill.
- Schools—Sheet Metal Pattern Drafting.**
St. Louis Technical Institute, St. Louis, Mo.
Schools—Warm Air Heating. Northern Institute, Cleveland, Ohio
- Screws—Sheet Metal**
Parker-Kalon Corp., New York, N. Y.
- Screens—Perforated Metal.**
Harrington & King Perforating Co., Chicago
- Shears—Hand and Power.**
Double-Duty Elbow Co., Aurora, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Joseph T., Chicago, Ill.
Unishear Co., The, New York
Viking Shear Co., Erie, Pa.
- Sheets—Black and Galvanized.**
American Rolling Mill Co., Middletown, Ohio
Davis Co., Inc., C. S., Chicago, Ill.
Granite City Steel Works, Granite City, Ill.
Inland Steel Co., Chicago, Ill.
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
National Enameling and Stamping Co., Granite City, Ill.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Ryerson & Son, Inc., Joseph T., Chicago, Ill.
Taylor Co., N. & G., Philadelphia, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
- Sheets—Iron**
American Rolling Mill Co., Middletown, Ohio
Merchant & Evans Co., Philadelphia, Pa.
- Sheets—Tin.**
Davis Co., Inc., C. S., Chicago, Ill.
Granite City Steel Works, Granite City, Ill.
Merchant & Evans Co., Philadelphia, Pa.
National Enameling and Stamping Co., Granite City, Ill.
Taylor Co., N. & G., Philadelphia, Pa.
- Sheets—Zinc.**
New Jersey Zinc Sales Co., The, New York, N. Y.
- Shingles and Tiles—Metal.**
Cortright Metal Roofing Co., Philadelphia, Pa.
Hopson & Co., W. C., Grand Rapids, Mich.
Milwaukee Corrugating Co., Milwaukee, Wis.
Wheeling Corrugating Co., Wheeling, W. Va.
- Shingles—Asphalt.**
Sall Mountain Co., Chicago, Ill.
- Shingles—Zinc.**
Milwaukee Corrugating Co., Milwaukee, Wis.
- Sifters—Ash.**
Diener Mfg. Co., G. W., Chicago, Ill.
- Sky Lights.**
David Lupton's Sons Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Smoke Pipe—Cast Iron.**
Heating Systems & Supply Co., Chicago, Ill.
- Snaps**
Peck, Stow & Wilcox Co., Southington, Conn.
- Solder.**
Chicago Solder Co., Chicago, Ill.
Double-Duty Elbow Co., Aurora, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Solder—Aluminum**
S. L. Products Co., Council Bluffs, Iowa
- Soldering Furnaces.**
Berns Co., Otto, Newark, N. J.
Burgess Soldering Furnace Co., Columbus, Ohio
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Double Blast Mfg. Co., North Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.
Thermo Gas Furnace Co., Chicago, Ill.
- Soldering Supplies.**
Double-Duty Elbow Co., Aurora, Ill.
Special Chemicals Co., Highland Park, Ill.
- Specialties—Hardware.**
Diener Mfg. Co., G. W., Chicago, Ill.
Hessler Co., H. E., Syracuse, N. Y.
- Stars—Hard Iron Cleaning.**
Fanner Mfg. Co., Cleveland, Ohio
- Statuary.**
Friedley-Voshardt Co., Chicago, Ill.
- Steel Stampings.**
American Tube & Stamping Co., Bridgeport, Conn.
- Stove Pipe Reducers.**
Allred Mfg. Co., Indianapolis, Ind.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Stoves—Camp.**
Quick Meal Stove Co., St. Louis, Mo.
- Stoves—Gasoline and Oil.**
Quick Meal Stove Co., St. Louis, Mo.
- Reps Heater Co.,**
Clyde, Ohio
- Stoves and Ranges.**
Cleveland Cooperative Stove Co., Cleveland, Ohio
Cox Stove Co., Abram, Philadelphia, Pa.
Gray & Dudley Co., Nashville, Tenn.
Oakland Foundry Co., Belleville, Ill.
Peninsular Stove Co., Detroit, Mich.
Quick Meal Stove Co., St. Louis, Mo.
Thatcher Co., Newark, N. J.
- Tacks, Staples, Spikes.**
American Steel & Wire Co., Chicago, Ill.
- Tile Cement—Elastic.**
Pesora Paint Co., Philadelphia, Pa.
- Tinplate.**
Davis Co., Inc., C. S., Chicago, Ill.
Granite City Steel Works, Granite City, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.
National Enameling and Stamping Co., Granite City, Ill.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Taylor Co., N. & G., Philadelphia, Pa.
- Tin—Perforated.**
Harrington & King Perforating Co., Chicago, Ill.
- Tools—TinSmith's.**
Bertsch & Co., Cambridge City, Ind.
Chicago Elbow Machine Co., Oak Park, Ill.
Dreis & Krump Mfg. Co., Chicago, Ill.
Great Lakes Supply Co., South Chicago, Ill.
Hopson & Co., W. C., Grand Rapids, Mich.
Marshalltown Mfg. Co., Marshalltown, Iowa
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Joseph T., Chicago, Ill.
Unishear Co., The, New York, N. Y.
Viking Shear Co., Erie, Pa.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
- Torches**
Berns Co., Otto, Newark, N. J.
Burgess Soldering Furnace Co., Columbus, Ohio
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Double Blast Mfg. Co., North Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.
- Trade Extension**
Copper & Brass Research Association, New York, N. Y.
Sheet Steel Trade Extension Committee, Pittsburgh, Pa.
- Trimming—Stove.**
Fanner Mfg. Co., Cleveland, Ohio
- Ventilators.**
Arex Company, Chicago, Ill.
Aeolus Dickinson Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co., Chicago, Ill.
Hopson & Co., W. C., Grand Rapids, Mich.
David Lupton's Sons Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
Royal Ventilator Co., Philadelphia, Pa.
Standard Ventilator Co., Lewisburg, Pa.
Sturtevant Co., Boston, Mass.
- Ventilators—Ceiling.**
Eaglesfield Ventilator Co., Indianapolis, Ind.
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Independent Register Co., Cleveland, Ohio
Tuttle & Bailey Mfg. Co., New York
- Windows—Steel.**
David Lupton's Sons Co., Philadelphia, Pa.
- Wire—Electrical.**
American Steel & Wire Co., Chicago, Ill.
- Wire Hoops**
American Steel & Wire Co., Chicago, Ill.
- Wire Rope.**
American Steel & Wire Co., Chicago, Ill.
- Wrenches.**
Coss Wrench Co., Worcester, Mass.
Faru, Ill.
- Zinc.**
Merchant & Evans Co., Philadelphia, Pa.
New Jersey Zinc Co., The, New York, N. Y.

Mention AMERICAN ARTISAN in your reply—Thank you!

WANTS AND SALES

For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employees, parties desiring to purchase or sell business, secure partners, or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

BUSINESS CHANCES

LIGHTNING RODS—Dealers who are selling Lightning Protection will make money by writing us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable is endorsed by the Mutual Insurance Companies and hundreds of reliable dealers. Write today for samples and prices. **L. K. DIDDLE CO., Marshfield, Wis.**

For Sale—Hardware—An exceptionally neat, clean stock of shelf hardware, sporting goods, enamel, aluminum and tin ware. S. W. P. line of paint, stoves and small implements. Electrical shoe repair department which man operates when not busy with hardware trade. (This man would stay with purchaser.) Stock invoice about \$6,000.00. Fixtures \$2,000. Located on M-11 Trunk Line in the heart of the finest fruit section of central Western Michigan. Farmer, Tourist and Resort Trade. Store is brick, 25 by 90, with full size cement basement with steam heat. Rent reasonable. Population 1,500, American. Four churches, fine school. Lakes and streams. Business well established, with clean competition. A surprise for somebody. \$5000.00 cash, balance on good security. Address—Box L, care of A. J. Scott, Secretary, Marine City Michigan. 12-3t

For Sale—Sheet metal, furnace and radiator shop in eastern South Dakota. Good growing business with best of tools and machines, including cornice brake, only brake in radius of 30 to 50 miles. Nearly modern 5-room house; 1-acre lot with fine apple and plum orchard; big garden; good size chicken house and garage. \$3,200 buys it all. Will accept \$2,000 cash, balance time at 6%. Address B-33, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

For Sale—Plumbing, heating and sheet metal business, also hardware, in eastern Iowa. No bank failure nearer than thirty-five miles. Lots of work ahead. Owner will sacrifice for a quick sale. One-half cash, balance in an interest-bearing note for one year. If you haven't the money or don't mean business don't answer. Health the reason for selling. Address B-37, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

For Sale—Fine hardware and sheet metal shop. Last year's business over \$40,000. 2 Dodge trucks, fine set of tinner's tools. Cheap rent, fine location. Will invoice around \$6,500, will take \$5,000 if sold at once. Plenty of work on hand with cheap help. If you are a worker or want to jump into an established business here is a chance. Have a fine patent and must sell one or the other. Address Hardware, 1475 South Pearl Street, Denver, Colorado. 13-3t

For Sale—Auto radiator and sheet metal business, including machines, tools and stock. Old established in city of 35,000 population. First-class location in Wisconsin. The only up-to-date radiator shop in city. Doing from \$800 to \$1,000 per month. Reason for selling, on account poor health. Address B-44, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

BUSINESS CHANCES

Wanted—Partner. A practical sheet metal worker to take charge of all the work and shop. Located in Cleveland, Ohio. Come in now for \$1,500 before the season opens. Address B-42, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted—Tinner to lease completely equipped shop in prosperous Missouri town of 7,000. Shop is operated in connection with hardware store, established over twenty-five years. For particulars write Box 124, Brookfield, Missouri. 12-3t

For Sale—Established fully equipped tin shop in Port Arthur, Texas. Population 40,000. Retiring on account of old age. Opportunity for a hustler. Address F. A. Wutke, 1712 5th Street, Port Arthur, Texas. 13-3t

Wanted—At once, general sheet metal workers' equipment. Will buy out shop if necessary. Address B-30, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Wanted—A location for sheet metal shop or good shop for sale, or partnership in a good business. Address B-24, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

For Sale—750 ft. of Goshen Copper Cable lightning conductor, with points, vanes and supports. Address Kemp & Jordan, Waynesville, Ohio. 13-3t

HELP WANTED

Wanted—A first-class tinner, a man that is capable of laying out any kind of work; one that can furnish excellent references. Prefer a man that belongs to the Masonic order. No. 1 wages to the right kind of a man. Steady work the year around. Please state in first letter the number of years you have worked and where now employed. Address Magin Hardware, Rockford, Illinois. 13-3t

Wanted—As soon as possible an all around plumber and steamfitter. We have a steady position for a man that would like to settle down in Northern Illinois. One who appreciates a good job. Please state age, nationality and wages expected. Address A-67, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Wanted—Tinner and sheet metal worker for steel garage and tank work of all kinds. Must be able to handle men and take charge of shop. Give references, age and salary expected. Address Commercial Steel Works, Inc., 1000 North Market Street, St. Louis, Missouri. 13-3t

Wanted—Combination plumber and tinner. One that understands furnace work. Also steamfitter, an all-around man. This is a steady year-around job for the right man. Please state wages expected in first letter. Address B-45, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted—Furnace salesman to sell to home owners; exceptional commission on all sales, plus a commission on net profits, plus a commission on cash sales. Address A. R. Harris, 13328 Carondelet Avenue, Chicago, Illinois. Phone South Chicago 9704. 12-3t

Wanted—Union tinner; one who is capable of taking charge of sheet metal and furnace shop. None other need apply. Address B-48, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted—At once, good all around tinner and furnace man. Steady job the year around. \$40 per week; 5 hours. Must understand job work also. Must not be over 50 years old. Address J. H. Barnett, Dodge City, Kansas. 11-3t

Wanted—First class sheet metal worker and plumber. Steady position the year around. Address B-40, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted—Reliable furnace man and sheet metal worker. Good wages and pleasant working conditions. Write to W. J. Bridges, Two Rivers, Wisconsin. 12-3t

Wanted—Good reliable tinner. Address H. S. Rasmussen, P. O. Box 378, George, Iowa. 13-3t

SITUATION WANTED

Situation Wanted—By sheet metal, warm air furnace man, with twenty-three years' experience in laying out and erecting work from blueprints. Would like to get in with some firm in Chicago or any other nearby town with the chance of advancement in view. Married. Forty-three years of age. Am not a union man. Address—B-36, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

Situation Wanted—By an experienced business man with 29 years' experience as an all around tin and sheet metal worker and warm air furnace man. 12 years' experience as solicitor and estimator in all branches of the business. Have some capital to invest in a well established sheet metal shop. Address B-47, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Situation Wanted—I would like to hear from some hardware firm that needs the service of a good sheet metal and practical furnace man with years of experience. Good references. Steady position. Might consider installation proposition with a good line of furnaces. Address B-30, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—Licensed plumber with full set of plumbing and heating tools. Would like to connect with some reliable hardware firm wanting to get in to the plumbing and heating game. Will make good proposition to an established firm. Address B-25, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By first class sheet metal worker, plumber and furnace installer. Also radiator repairing and all general repairing. Would like steady position where there is plenty of work. Address B-41, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Situation Wanted—As branch manager or foreman for a reliable moist air heating firm. Am 24 years of age with 8 years of practical experience. Do not use liquor or tobacco in any form. Can furnish the best of references. Address 5016 Halifax Avenue South, Minneapolis, Minnesota. 12-3t

Situation Wanted—An all around plumber, pump and windmill man. Can do eave spouting and furnace work. Can give best of references. Can come at once. Address B-23, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By buyer and manager for retail hardware store. Have had 15 years' experience in the retail hardware business; also 15 years' road experience. Address B-46, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Situation Wanted—Furnace man with 15 years' experience wishes to connect with good firm. A1 installer. Best of references. Only steady position considered. Address B-17, care AMERICAN ARTISAN, 620 South Michigan Boulevard, Chicago, Illinois. 11-3t

Situation Wanted—Young man with two years' experience would like to get in tin shop, and have steady work year around. State wages. Can give best of references. Address B-29, care the AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By tinner and furnace worker in eastern Iowa or Illinois. Will work for reasonable wages is steady. State wages in first letter. Nothing but steady position considered. Address Tinner, 1114 11th Street, Sioux City, Iowa. 11-3t

Situation Wanted—By tinner, plumber, expert radiator man and oxy-acetylene welder. Married. Will go anywhere. Address B-32, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By first-class tinner and sheet metal worker. 20 years' experience. Address B-35, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

Situation Wanted—By plumber and furnace man who can do electric wiring and pump work. Can also help in hardware store. 48 years old. Desire steady position. Address B-26, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

SITUATION WANTED

Situation Wanted — First-class sheet metal worker, estimator and draftsman, experienced to produce any sheet metal work coming to general jobbing shop of larger city, including heating and ventilating. Address B-33, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

Situation Wanted — First-class sheet metal worker with years of furnace and hardware store experience. If you appreciate reliability and initiative write to B-31, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted — By a first-class tinner and furnace man, experienced in all branches of the trade. Wisconsin preferred. Address B-39, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

TINNERS' TOOLS

For Sale—One pipe folding machine, 30½ inch, in good condition, \$15.00; one pipe folding machine 30½ inch in good condition, \$12.00; one forming machine, 1½ inch x 30½ inch rolls, \$15.00. Address B-27, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

For Sale—One Pexto beading machine No. 620, one pair O. G. rolls and standard \$16.00; one small burring machine without standard \$5.00; one stove pipe crimper without O. G. rolls or standard \$7.00; one roll 1½x30 \$11.00. F. O. B. Clinton. W. W. Selfried, 106 East Green Street, Clinton, Missouri. 13-3t

For Sale—One four section revolving steel nail bin with twenty compartments, like new. One eight foot holler oak hardware wrapping counter with 27 bins in rear, excellent condition. Address B-13, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Wanted—A good reliable all around sheet metal worker for jobbing shop. Address B-19, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

For Sale—30-in. forming roll, pipe folder and a few other tinner's hand machines. May trade for bending brake. Address Box 548, Pierre, South Dakota. 11-3t

Wanted—Squaring shears blades to sharpen. 24-hour service. \$1.50 per set. All work guaranteed. Address P. C. Woods, 1002 East Main Street, Washington, Iowa. 13-3t

Wanted—To buy a second-hand 30-inch iron bench folder. Address B-34, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

Wanted—A set of tinner's tools and a 10-ft. cornice brake. Address B-43, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted — A three-quarter inch pipe pusher in good condition. Address Young Hardware Company, Bellevue, Iowa. 12-3t

SPECIAL NOTICES

Special Notices — displayed want ads—are charged at the rate of \$3.00 per inch per insertion.

PATENTS

HUBERT E. PECK

Patent Attorney

Barrister Bldg., WASHINGTON, D. C.

SALESMEN WANTED

Large southern stove manufacturer of coal, wood, and gas ranges, stoves, and heaters, has opening for experienced stove salesman in Alabama, Georgia, Florida, North Carolina and South Carolina. Reply, giving experience, references, etc. Address L-58, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-2t

SPECIAL NOTICES**WANTED**

Traveling men who have had experience in selling stoves and warm air furnaces in Indiana, eastern parts of New York, Connecticut, Massachusetts, and Vermont, and the eastern parts of Pennsylvania and New Jersey, address L-48, care AMERICAN ARTISAN, 620 South Michigan

SECRETARY WANTED FOR**STATE SHEET METAL TRADE ASSOCIATION**

Must be a live wire with pleasing personality. We want a man who is an organizer—one who is willing to work and who is a good, convincing talker.

In replying give full details as to your experience and qualifications. Tell us just why you feel that you can fill the bill.

Your reply will be held in strictest confidence. Address Sheet Metal Trade Association, care of AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

SPECIAL NOTICES**SALESMEN WANTED**

We want a man for Kentucky and two more for New York territory at once. Must be practical warm air heating men with sales ability to produce business, in three of the best territories we have in the eastern states. Write or wire, giving your experience and references in first letter. Address, The Lennox Furnace Co., Syracuse, New York. 11-tt

SALESMAN WANTED

Experienced and successful stove and range salesman. Good proposition for a good man. Address Gray & Dudley Company, Manufacturers of Washington Stoves and Ranges, Nashville, Tennessee. 7-3t

WE WANT A MAN

Who is thoroughly versed in all branches of Warm Air Heating. He must have sales experience and sufficient executive ability to act as Heating Engineer. There will be traveling to do until the work is well organized. We prefer a man above 38 years of age. Must have tact, diplomacy and personality. All replies will be treated in strictest confidence. Address L-57, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t



"You see, I have to do things big, judging by the size of my family," writes a student on the back of a Kodak picture similar to the above. He adds: "Nothing small about me, I got through being a cheap mechanic when I took your course, and my business has grown wonderfully since, and I feel I really owe it to the St. Louis Technical Institute."

LEARN TO BECOME A CONTRACTING ESTIMATOR SALESMAN!

Shops are now putting on Salesmen to do Estimating and bring in the work. The one-herse shop will have to struggle harder as time goes on. Some shops employ as high as 12 Estimators and pay from \$35 up to \$75 a week. It is the one big opportunity for ambitious men.

OPPORTUNITY IS CALLING YOU—PREPARE NOW

Our Studies in Estimating have just been rewritten and redrawn and represent the last word in all branches of Sheet Metal Estimating and Contracting. It is for Mechanics, Salesmen, Foremen, Employers, Manufacturers, etc.

WE TEACH YOU IN YOUR OWN HOME, PERSONAL, CLEAR, DIRECT

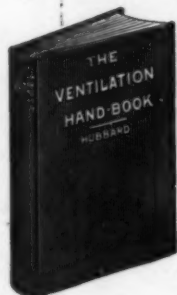
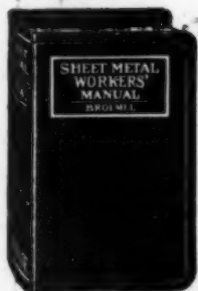
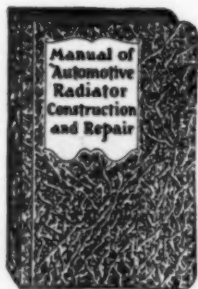
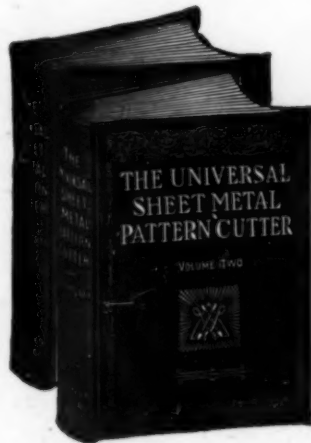
We have a superior Service for you; the cost is very moderate—the time for additional training is here during the long Winter Evenings. WRITE.

Full information Free. Select your Course.

- ☐ SHEET METAL DESIGN AND PATTERN DRAFTING
- ☐ SPECIAL WARM AIR FURNACE HEATING
- ☐ FAN HEATING AND VENTILATING ENGINEERING
- ☐ SHEET METAL CONTRACTING AND ESTIMATING

ST. LOUIS TECHNICAL INSTITUTE O. W. Keth, Prin. 4543 Clayton Ave., ST. LOUIS, MO.

Save on Books by Ordering With Your Subscription Renewal



The Universal Sheet Metal Pattern Cutter Vols. 1 and 2

By Neubecker

HERE are two books that can't be beat. They are the most practical and useful treatises on the subject.

Work of all the branches of the trade and the broadest scope of details are found—inside and outside work—small jobs and the most complicated are shown, explained and profusely illustrated.

The first volume deals with all types and kinds of inside small and large sheet metal work.

The second volume of this practical work deals with the more advanced branches of sheet metal work, in fact is largely devoted to the architectural end of the business. It consists of 400 double column pages and is illustrated with 711 engravings showing all methods under treatment, as well as perspective views of the subjects of the patterns, and other demonstrations in their finished state. It includes drawing, full sized detailing and lettering, development and construction of sheet metal cornices and skylights, leaders, copings, pediments, circular work, dormer and bay windows, sheet metal ornamentations, electrically illuminated signs, hollow metal windows, frames and fire doors, metal roofing, etc.

The volumes are bound in heavy cloth and each measures 9 x 12 in. Each contains over 380 pages and 680 original drawings. Price \$7.50 each.

Exhaust and Blow Piping

By Hayes

EXHAUST and Blow Piping has had an unusually big demand. A fresh supply is now off the press and is in our hands for immediate delivery. It has an invaluable treatise on the planning, cost, estimation and installation of fan piping in all its branches giving all necessary guidance in fan work blower and separator construction. 159 pages, 5 x 8, 51 figures, Cloth, \$2.00.

Manual of Automotive Radiator Construction and Repair

By F. L. Carfman and T. H. Leet

ANYONE interested in Radiator Repairing will find the 135 pages of practical instructions and the 120 illustrations showing actual construction and repairing a big help. In a condensed manner some four to five thousand answers to questions are given. It is thoroughly practical as both authors are men of wide experience in this work. Printed in large, easy to read type. Measures 5 1/4 x 9 inches. Price \$2.50.

Sheet Metal Duct Construction

By Neubecker

A TREATISE on the construction and erection of heating and ventilating ducts, including the cutting and forming of the metal, the laying out of the elbows etc. A practical expert wrote this book and you'll find that it covers the subject thoroughly. By William Neubecker. Bound in cloth, 194 pages, 217 illustrations. Size 5 1/4 x 8 1/4 in. Price \$2.00.

Sheet Metal Workers' Manual

A NEW book produced by the combined efforts of L. Broemel, a practical man, and the late Professor J. S. Daugherty, instructor in Sheet Metal Work at the Carnegie Institute of Technology, Pittsburgh. Pattern drafting is its biggest feature; not only tells how to make the pattern, but how to develop it with modern machines and tools; gives valuable assistance on soldering, brazing, welding, crimping, beading, straight, circular and irregular cutting, in fact covers every angle of the trade. Bound in leatherette; 590 pages; more than 400 pen drawings and illustrations. Price \$2.00.

Essentials of Sheet Metal Work and Pattern Drafting

By Professor J. S. Daugherty

INVALUABLE to the sheet metal worker, contractors and instructor, as well as an elementary and advance course for vocational and trade school students and apprentices. Some of the subjects covered are pattern cutting, soldering, edging, wiring, radial line development, pipes, elbows, miters, pitched covers and flaring articles, pipe intersections and tee joints, 181 pages, substantially bound in blue cloth; profuse illustrations. Price \$1.50.

The Ventilation Handbook

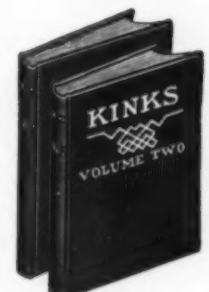
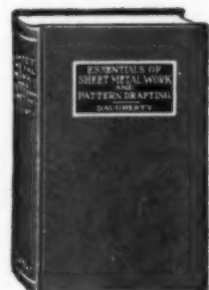
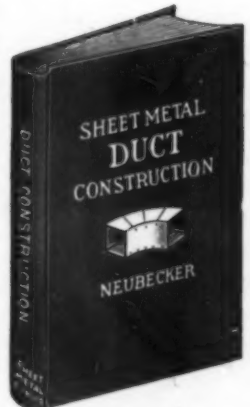
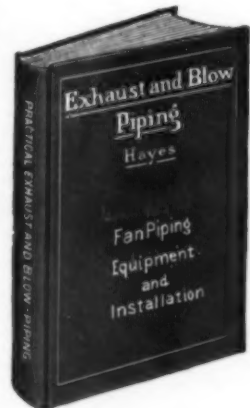
By Charles L. Hubbard

A PRACTICAL book designed to cover the principles and practice of ventilation as applied to furnace heating; ducts, flues and dampers for gravity heating; fans and fan work for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00.

Kinks and Labor Savings Methods for Sheet Metal Workers Vols. 1 and 2

VOLUME I. There are hundreds of ideas and expedients, all contributed by sheet metal workers throughout the country, illustrated by cuts and original drawings. Cloth bound. Size 4 1/4 x 7 in. Price \$1.00.

Volume II written in same popular style as Volume I. Places at your disposal a comprehensive collection of ingenious ways of executing many practical tasks in much more simple way than if done in the regulation manner. Also contains special articles on Automobile Repairing; gives a very practical series of illustrated directions on erecting metal ceilings with ten guide rules which will save time, trouble and expensive mistakes. Price \$1.00.



BOOKS WANTED

[] Send me complete book catalog.

USE THIS HANDY ORDER BLANK

AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

FOR the enclosed \$_____ send the books ordered and enter following subscription (or renewal).

Name_____

Address_____

NOTE — Deduct 10% from TOTAL amount of order when subscription is included with order for books — write your name and address on margin of this advertisement.

Free Air Capacity
in Jones National and
International Registers.

The Face Capacity
Exceeds the Throat
capacity which exceeds
the Pipe Capacity.

*And the Beauty is not
Sacrificed.*

The STANDARD CODE says →

REGISTERS

Section 7. (a) When base-board or wall registers are used, they shall be properly and permanently attached to the stack head in such a manner that will prevent any leakage of air between the head and the register.

JONES- NATIONAL REGISTERS

Center is
held in
place by
two Lugs
in here

A Patented SEALING
STRIP that SEALS the
JONES - NATIONAL
REGISTER to the box.

Fastens and Seals
Tight to the Register
Box (*not to the
studding*) Comply
with the Code
Completely.



Once a "USER" of JONES-NATIONALS always a "USER"

L.R.B. D 26

UNITED STATES REGISTER COMPANY BATTLE CREEK, MICHIGAN

Branch Houses: Minneapolis, Des Moines, Kansas City, Albany. Supply Houses Everywhere.

